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ORIGINAL ESSAYS.

Remarks on Hæmorrhage, read before the Medical Society of the city and county of New-York, by William Moore, M. D.

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No disease, to which women are liable, excites greater alarm, or is attended with more danger, than a hæmorrhage from the uterus when it occurs during the latter months of pregnancy, and is so profuse as to be styled a *flooding*. But it has been found from experience, that all such cases of flooding, although apparently similar at their commencement, are not in reality equally dangerous; for in some, even when left entirely to themselves, or only treated by palliative remedies, the flooding abates as soon as labour pains commence, and the patients are happily delivered by the efforts of nature; while in others, every contraction of the uterus, and the slightest labour pains increase the flooding to such a degree, that the patients will inevitably die undelivered, unless timely assistance be afforded by art.

This being the case, it therefore becomes of the utmost importance in the treatment of this disease, to be possessed of some *practical criterion*, by which we may determine early, in every case that occurs, whether it be of that kind, which may be safely trusted to palliative remedies and the efforts of nature; or whether it will ultimately require the

assistance of art. In the one case, we shall be induced not to interfere where it is unnecessary; while in the other, it will become our duty to deliver the patient as soon as it can conveniently be effected, and before she is so far exhausted by loss of blood, as to render the assistance of art unavailing.

A criterion of this kind was attempted to be established some years ago, by Mr. Rigby, a surgeon of eminence, in England, in a pamphlet which he published upon uterine hæmorrhage. And I think the attempt was not without success; for, since having read his Essay, I have practised upon his plan, with much satisfaction to myself, and, I trust, with advantage to my patients.

Mr. Rigby divides all floodings, that occur in the latter months of pregnancy, into *accidental* and *unavoidable*.

Accidental floodings are such as happen when the placenta has been attached to any other part of the uterus than over its mouth. Unavoidable floodings occur when any part of the placenta is over the mouth of the womb. And he asserts, that all accidental floodings may be safely trusted to palliative remedies and the efforts of nature, while every case of unavoidable flooding will require delivery by art.

The criterion in question, therefore, which is to regulate our practice, is, to ascertain, as early as possible, *whether or not any part of the placenta be over the mouth of the womb.*

It is to be observed, however, that in the commencement of every case of flooding, whether accidental or unavoidable, the palliative remedies are to be employed with equal assiduity; but, in the latter case, they are not to be solely confided in, after the os internum is so far relaxed as to admit the hand into the womb, and delivery by art becomes practicable.

The remedies, which Mr. Rigby calls palliative, are those generally employed to restrain uterine hæmorrhage, such as absolute rest of body, composure of mind, a hard bed, light covering, fresh cool air, cold applied to the external

parts, and within the vagina, by means of cold water and ice, anodynes, astringents, &c.; but more especially the *rupturing of the membranes*. Upon this he lays great stress, and recommends it to to be performed as soon as it can be effected, after it has been ascertained that the membranes alone are covering the os internum. This, by suffering the waters to escape, produces a contraction of the uterus, which diminishes the mouths of the bleeding vessels, and presses them firmly against the body of the fœtus, and thus moderates the floodings, and sometimes suppresses it altogether; while the accession of labour pains is thereby hastened, and the woman is thus safely delivered.

With respect to bloodletting, as a remedy in uterine hæmorrhage, we may observe, that, as no flooding of consequence can happen in the latter months of pregnancy, which does not proceed from a partial or total detachment of the placenta, it is evident that the hæmorrhage in these instances will be of the passive kind, and that therefore bleeding cannot be a proper remedy where the flooding is at all alarming, or has continued for any length of time. But, at the commencement of the complaint, where the discharge is moderate, if we shall judge, from the strength of the patient's pulse, her florid countenance, and other marks of plethora, that she will bear the loss of more blood with advantage, it will be best to take it from her arm, and to endeavour, by every means in our power, to arrest the discharge of blood from the uterus as soon as possible.

Some practitioners place great reliance upon plugging the vagina with lint, tow, rags, &c., so firmly as to prevent the egress of blood, which accumulating and coagulating about the mouth of the womb may tend to suppress the hæmorrhage. This, is, no doubt, a very proper remedy, and under some circumstances may be productive of the happiest effects; but, whenever the flooding, by its frequent recurrence, or profusion, becomes in the least alarming, our first

care should be, to ascertain precisely by what part the mouth of the womb is covered. This can only be done by introducing the hand fully into the vagina, so as to get one or more fingers within the os internum.

If the head shall be found to present with nothing interposed between it and the finger; except the membranes, they must be ruptured as soon as they are sufficiently tense, and the delivery may then be safely trusted to nature; but if the placenta shall be found covering the mouth of the womb, and this is sufficiently relaxed to suffer the hand to pass with ease, whatever part of the child may present, it will be best to deliver the patient as speedily as possible, by passing the hand through the placenta and membranes, turning the child, and bringing down one or both feet. Here I must take occasion to remark, that I am never very solicitous to find both feet when one can be readily grasped, since I am pursuaded that we are quite as likely to save the child when delivered by one foot, as when both feet are brought down together.

Whenever it has been ascertained that the placenta presents, but that the os internum is still so thick and rigid, as not to suffer the hand to pass into the womb without using great violence, it will be proper to postpone the delivery until the parts shall be somewhat more relaxed, which they very soon will be, if the flooding continue. In a case of this kind, plugging the vagina firmly, so as to prevent the escape of blood, may produce the happiest effect; for by accumulating the blood in the vagina and about the mouth of the womb, it will tend to soften these parts, and thus hasten the period when the delivery may be effected with ease. And it will always be found, that the sooner the delivery is effected, after it can be done with tolerable facility, the better it will be both for the mother and child.

After we have once assured ourselves that the placenta is attached to the mouth of the womb, if it shall be thought

proper to postpone the delivery, the patient ought to be watched with the strictest attention; and, even though the flooding should cease entirely, she ought never to be left in a situation where assistance may not be immediately had when it becomes necessary; for it is most certain, that the flooding will return whenever the womb shall begin to contract; and sometimes it recurs with such violence, that the delay of a few minutes may be productive of the most fatal consequences.

Before I conclude this paper, I must request permission of the Society, to detail to them the result of my own experience in this disease, since I began to practise upon Mr. Rigby's plan.

Of forty-three cases of uterine hæmorrhage, which commenced at different periods during the three last months of pregnancy, twenty-eight were *accidental*, and fifteen *unavoidable*. In the accidental cases, twenty-six mothers recovered and two died; one of them died a few hours after she had produced two fine boys, both of whom did well. They were all delivered by the efforts of nature except two, in one of these the child was turned and delivered by the feet, partly on account of the flooding, but chiefly on account of the protrusion of the umbilical cord; the mother did well, but the child was dead. In the other case, as the labour was unusually protracted, the delivery was effected by the forceps, and both mother and child did well. Of thirty children brought forth by these twenty-eight mothers (for two of them had twins) sixteen were born alive.

The fate of the fifteen unavoidable cases was more unfortunate; for of these, there were five which proved fatal to both mother and child; three which proved fatal to the mother alone; four which proved fatal to the child alone; and three in which both mother and child did well.

They were all delivered by art except two; in both these cases, the margin only of the placenta was over the mouth

of the womb, and when the membranes were ruptured, the head was immediately forced down into the pelvis by labour pains, which restrained the hæmorrhage, and the patients were happily delivered by their means.

From the above statement of facts we may draw the following conclusions:—first, that of all the flooding cases which occur in the latter months of pregnancy, about two-thirds are accidental, and may be safely entrusted to nature, as the mothers generally recover, and a majority of the children are born alive. Secondly, that the other third are unavoidable cases, which prove fatal to about one half the women and children who are so unfortunate as to be the subjects of them.

I know not whether the practice of others may lead to the same conclusions? but I hope my own will in future be productive of a more fortunate result; for, upon reviewing what has past, I think there are some cases on my register which proved fatal, where the event might *possibly* have been different, if the patients had been sooner delivered.

Pathological Observations on Aneurisms; illustrated by four recent cases. *By Felix Pascalis, M. D.*

Mr. Thomas W. 37 years of age, well made, and of ordinary size, light complexion, and apparently good constitution, had been working, laboriously, at the trade of a brush-maker, and was said to have indulged in intemperate habits. He, many months since, complained of pain in his breast and difficulty of respiration, especially when he used his arm in the fatiguing exercise of his machinery for cutting bristles. He was soon seized with symptoms of pulmonary congestion; dyspnœa and violent coughs. Frequent bleeding did not prevent him from being exposed to relapses from time to

time. The appearance of a small tumour between the fourth and fifth ribs of the right side, obliged him to consult successively several physicians; but nothing could be found to retard the rapid progress of the tumour, and in less than three months afterwards, when I saw it for the first time, I found there could be no doubt respecting the nature of the case; although the great projection above the surface of the ribs and sternum on the right side, rendered it surprising that the aneurism could originate from the aorta. The pulsation was distinct and violent, his face and lips were suffused with a purplish colour, his pulse small and rather frequent; he felt averse to a recumbent posture, and when seated, preferred to bend his body forward. He could not bear pressure, even for a few hours, upon the tumour. I had but a short time to observe the alarming progress of the disease; for soon, his respiration growing very difficult, he expired, without a groan or a struggle.

I am indebted to J. C. Cheesman, M. D. one of the surgeons of the New-York Hospital, for the autopsic examination, to which the friends of the deceased consented, on condition that it should be limited to a view of the aneurismal tumour. It emerged through the fourth and fifth ribs and the sternum on the right side, leaving of that bone, barely enough to support the ribs of the left. It occupied a circular space of about four inches in diameter, and was laid bare by throwing to the right, a flap of the muscles and integuments dissected from the top of the sternum as far down as the sixth rib. The sack was thick and strong. Many spicula of the bones, destroyed by pulsation, were found in the cellular substance around the tumour; and it is a matter of astonishment that such a shattering and destruction of bony substances can take place in aneurism without causing the least local inflammation. On opening the tumour, there was seen a thick layer of black grumous blood, and below, another, fibrous and ragged, like *textura carnium*. The cavity was now seen half

filled with red serum to the height of the fluids contained in the thorax, with which those of the sack were mixed through the crevice, which had been formed in its bottom and thinnest part, over the right lung. It was emptied and exposed to view by removing the fragments of the half-worn ribs, and it was then ascertained that the depth of the aneurismal tumour to its mouth in the aorta was eight inches at least, (the sack being irregularly conical,) and from four to five in its largest transverse diameter. A section of the aorta having been made together with the appending mouths of the innominata, the left carotid and subclavian, the whole of the internal surface appeared of a glossy white substance, and perfectly similar to the aneurismal sack. This had, however, gradually diminished in thickness, towards the anterior part, where it appeared strongly to adhere to a cellular membrane; and the spot from which the expansion had arisen, forming an orifice an inch and a half long, was perfectly smooth on the edges, and without the appearance of former or recent stricture. If it be true, as Scarpa suggests, that the external cellular coat of the artery can take on so dense and smooth a surface, why is it that at the point of expansion, and much farther, the same thickness, density, and smoothness of surface, should remain, while in a false aneurism, the interception of the trunk of the artery, or part of it, by rupture, can always be distinctly traced and detected, even by the naked eye?

Were it my particular design to discuss here, the so much controverted pathology of true or false aneurism, respecting the rupture of the internal or proper coats of an artery which constitutes it, as supported by Scarpa, Fernel, Forestus, and, lately, by Dr. Jameson, of Baltimore,* I would confess that the appearances in this case did not justify the theory. I do

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* Vide American Medical Recorder. Vol. iv. p. 94.

not believe that a minute examination of both artery and sac by the process of maceration, could have exhibited a primordial rupture of any one of the proper coats; for in none of the similar cases hereafter to be adduced, could any such proof be found. On the other hand, there is one circumstance to be explained. The space of the aneurism of the aorta which was not, at its origin, much larger than the diameter of the tube, and was somewhat square and formed at right angles, designated thereby, a local or circumscribed injury, rather than the effects of an organic disease, which could not be confined to a small round or square space without affecting a greater extent of the arterial trunk. How can this be accounted for, without supposing an absolute rupture of the proper coats? I answer, it is sufficient to conceive that in a moment of violent impulse upon the arterial walls, or of distention of them, the rupture of one or many fibres being effected in the muscular coat, there is a want of elasticity or resistance at the same point, from which every succeeding motion would widen the rent. Could not the same create a proportionate expansibility for the express purpose of counteracting the impetus of the blood upon the injured coat?* This phenomenon never ceases until no more room is left to contain the enlarged tumour, and is simultaneous upon all the coats composing the arterial trunk. Hence it is evident that the part of the tumour of this patient which was much thinner than the other portions of its surface, and offered to the sight a longitudinal crevice was the identical spot of the

* It is here understood that the power which wounded arteries may possess to heal after being punctured or partially wounded by means of pressure or ligature, as proved by the experiments of the ingenious J. F. D. Jones, M. D has nothing to do, and cannot be confounded, with that other law of expansion with which the arterial coats are endowed, after a small or partial lesion of fibres. It is one of those phenomena, the reality of which is, and must be admitted, while we are obliged to regret that we have it not in our power to account physically for it, any more than we can for the formation of pus.

aorta at which a few fibres had originally given way. The expansion of that side of the trunk afterwards carried the dangerous spot to the greatest possible distance. Now, let us consider whether this condition of the artery is not as much an organic disease as the tumefaction of a gland, the periosteum, or the bones. Furthermore, does it not probably affect the contexture of the whole trunk, above and below the aneurismal sac, so as to preclude any reasonable hope of success from a surgical operation? and if to this morbid expansion we add all other kinds of alterations produced on arteries, by the scrofulous or cancerous principle, by syphilitic and mercurial diseases, and by ossification, it will be found that spontaneous aneurism in the human system cannot reasonably fall under the dominion of surgery, unless caused by external injury, and at a sufficient time before, the consecutive expansion of the coats has been carried to any considerable extent.

"A case much similar to the above took place at Paris, in a man of business, 45 years of age, well made, and of an excellent constitution.* He had indulged in debauchery in his youth, and afterwards suffered great reverses of fortune. The nature of his aneurismal tumour, the symptoms and duration of the disease, progressed in the same manner as those of the last case; except that the aneurism originated a little higher, and from under the arch of the aorta, projecting against the sternum, and the second, third, and fourth ribs of the right side, which, besides, were not so much destroyed. The excavation had opened internally. After a sufficient maceration in a solution of corrosive sublimate, the three arterial coats of the sac were dissected and separated by the scalpel, showing that in no part of the distended artery had any previous rupture of the proper coats taken place."

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* This, and the following cases are related by H. F. Janin and others, and are extracted from the *Cercle Medical*, (Paris) No. 1. p. 11.

"A woman, 68 years of age, had passed from the possession of a splendid fortune to a most shocking degree of misery and poverty. Violent pulsations under her right clavicle indicated the existence of aneurism. She experienced a very violent and almost suffocative cough. She did nothing for her disease, and died in the street. The tumour was formed at the arch of the aorta and origin of the left carotid. The arterial coats in this case also were carefully separated in every point of the sac, and no rupture could be seen at the mouth of the arterial trunk."

"A man, 47 years of age, died in the act of throwing up a great quantity of spumous blood. An aneurismal tumour was found to have arisen from under the arch of the aorta, and it had formed adhesions with the left lung, into which it burst. By a minute dissection, the three arterial coats were ascertained in every part of the sac. Of this last subject, it is remarked that he had often contracted syphilitic disorders, and been under the operation of mercury, which circumstances may give weight to the opinion of those who think that either of them are capable of much influence in the formation of aneurism."

These facts, all recently observed in Paris, unquestionably prove that aneurisms frequently occur without a rupture of the proper arterial coats. We may add the testimony of Dr. Joseph Hodgson, in his treatise on the arteries and veins, (Lond. 1815.) who establishes, by authentic and numerous dissections, that, "the greatest number of aneurisms commence by a partial dilatation of arteries." In the case of a woman who died with an aneurism of the aorta, he ascertained that the three coats of the artery had progressed *pari passu* without interruption by rupture, and had formed each a like fossa or excavation. Similar preparations have since been presented to the faculty of medicine of Paris. All these facts therefore, prove the existence of that species of aneurism, which originates, not from a rupture of any one of the

proper arterial coats, but from the smallest division or distention of a fibre, which immediately determines the extension of the whole trunk of the vessel. But there is another order, for the definition of which I may use the words of the Italian Professor Antonio Manzoni.* "There is no doubt," says he "that humoral diseases sometimes cause aneurisms by altering arterial coats, weakening them, whence there results an ulceration, through which the blood running into the cellular coat constitutes the false aneurism," &c. By *humoral diseases*, the professor means scrofula, cancer, syphilis, tetter, scurvy, and others.

I am the more satisfied of the correctness of this definition, as I have proved that by the rupture of one fibre only of any of the proper coats, a morbid extention of the whole trunk is immediately produced, which should therefore prevent the rupture of the coat itself; and when this is found to exist, it must undoubtedly have been produced by ulceration as above explained. Many instances of the kind are known, and a great number of undefined causes of arterial diseases have been noticed, particularly by John Bell, and Peltan, of Paris, who has described the occurrence of no less than sixty true aneurisms in the same individual. The following, however, must sufficiently illustrate the frequency of spontaneous causes of false aneurism.

"In consequence of many contusions on his right leg, a mason, of 42 years of age, successively suffered various symptoms of a deep disease of the limb; pain, œdematous swelling, and, lastly, a large cancerous ulcer over the tibia. The inguinal glands were swelled and hardened into a knotty string in front of the psoas muscle. His leg was soon after amputated by Mons. Roux; it rapidly healed, and he became able to walk on crutches. He had not been long dismissed from the hospital, when the appearance of a small

* Memoirs of the Italian Society of Sciences, vol. xviii.

ulcer on the glands of the groin which had never totally subsided, rendered it necessary for him to return into that charity. The progress of this ulcer proved rapidly alarming, and the whole groin presented a vast cancerous surface, with so copious a discharge of very fœtid matter, that the patient became exhausted by it. The pulsation of the crural artery could be seen and distinctly felt in the bottom of the ulcer; and a slight hæmorrhage from this vessel aggravated the case. Although it was easily checked, yet it was renewed, and became more and more copious, until the trunk of the artery giving way during the night, the unfortunate man perished.

The anterior part of the vessel was of a grey colour, much like the adjacent fibrous and muscular parts. Its coats were soft and thin; and the posterior surface of the trunk was found corroded by the cancerous virus. This rare instance of an arterial cancer proves the possibility of other diseases such as scrofula, and syphilis affecting the arterial system.

The old division of true and false aneurism appears to me correct enough, since the simultaneous expansion of all the coats of an artery is the prominent and distinctive character of the first; and ulceration and rupture of one or all of them, that of the second. But although both may be referred to external injury, or internal disease, and the cause of one is not exclusive of the other, it appears that a morbid agency oftener produces a true, and lesion a false aneurism. I do not see the necessity of forming a third species, called mixed aneurism, because that which exists by expansion is never ruptured, until it terminates in death, and that which has commenced by ulceration or rupture either forms its fossa in one of the proper coats, or in the sheath of the trunk. In the first place it is characterised by expansion, and in the other is completely so by rupture;—it is therefore a *true* or a false aneurism.

Again, aneurisms in relation to practise, constitute two classes;—1st. those in the trunk of the body, and 2nd. those of the upper and lower extremities. The first seem to be generally irremediable, for obvious reasons and difficulties, with the exception of the external iliac artery, which, in a few instances, has been successfully operated upon. Its aneurismal expansion can indeed be ascertained before the body of the vessel becomes materially diseased; an operation may also be attempted on the subclavian artery, for we have lately seen the same in a healthy condition successfully tied in the New-York Hospital, for the amputation of an arm at the diseased shoulder, by Dr. A. H. Stevens.

The second class of aneurisms, or those which are frequently confined to the extremities, can be perfectly controlled by remedial applications and surgical operations. But the *varicose* aneurism, and that from *anastamosis* in this class seem to form, by their cause, nature, and remedies, a species perfectly distinct from the above orders of *true* and *false* aneurisms.

Observations on Amputation at the Joints, by Dr. James Mann.

It is the established opinion of Physicians and Surgeons, that amputations at the large joints will seldom succeed well. This general sentiment, which we presume, is not the result of practical observation, has deterred from the performance of operations at the knee, elbow, ankle and wrist joints. The following is an abstract of the opinions of the most eminent medical writers on this subject, as given by the Encyclopædists—"Though amputations at the joints with the fingers and toes prove successful, the application of the same practice at the other joints, as the knee, elbow and ankle, must be attended with great difficulty. For in the first

place, this method of amputating, is in fact more tedious than the operation above the joint: it is also equally painful, the hæmorrhage equally dangerous; and as the soft parts are mostly aponeurotic and tendonous, a favorable inflammation and suppuration are not so likely to ensue. Besides, it is very difficult at the elbow and ankle joints to save so much muscular substance and skin, as are requisite for covering the bone at the surface of the articulation; on which account, a tedious suppuration and exfoliation generally take place, and there is reason to apprehend, that we may afterwards be compelled to amputate above the joint and saw the bone."

It is not singularly strange that surgeons have hesitated to make an experiment of the joint operation, having formidable objections to this mode of amputation presented by all surgical writers of celebrity. These objections, we however presume, are not the result of practical observations; they originated at an early period of medical science, previous to the improved method of saving teguments sufficient to cover the end of the stump; when no more skin and cellular substance were saved than to correspond to the length of the bone of the amputated limb; and when the whole surface of the wound was left exposed and a new covering was to be formed by the vital powers. It is well known to the elder physicians, that this mode of amputation required the tedious period of six or nine months to effect a cure of the wound, even when the operation proved successful. It was during this unimproved state of surgery that operators learnt by experience that fleshy granulations did not shoot out from the articulating surface of bones denuded of teguments with the same facility, as from the ends of bones divided by a saw; hence operations, at the articulations, were considered bad practice. Although the modern improvement of saving teguments sufficient to cover the stump has shortened the period of cure to one sixth of the time required in the old

method, yet prepossssions, that teguments do not unite, kindly over the articulating surfaces of bones, have deterred surgeons from amputating at the large joints. The fact, that teguments will unite as expeditiously with the articulating surfaces of bones as other muscular parts, required only the proof of practical demonstration. Previous to this demonstration, a surgeon is cautious not to deviate from an approved method of operating. Even if persuaded that an improvement may be made in practice, yet feeling the weight of responsibility, he is unwilling to risk his reputation upon a new mode, lest, if unsuccessful, he may incur public censure.

Amputations at the finger and toe joints are frequently performed, and no objections are now offered to this practice; but where amputation is required on the larger limbs, the operation is made above the joint: as if the vital powers are less provident when put in requisition to remove injuries on the larger joints, than on the smaller. Exceptions, in favor of the joint operation, it is true, are made at the hip, and at the shoulder at its scalpular articulation; the reason assigned for these exceptions, is that these joints are surrounded by thick integuments, which may be saved to cover the wound made by the loss of the limb.

Larrey in his surgical memoirs has recorded many cases of successful operation at the shoulder joint and even at the hip, yet he no where recommends amputation at the knee, nor elbow. He observes that it is preferable to amputate below the knee, than above, if circumstances admit; and prefers to operate at the tuberosity of the tibia, provided the amputation may be made below the insertion of the cartilaginous expansion connected with the patella, rather than above the joint; but as he is silent respecting the operation at the articulation, it is inferred, that he does not view this point, as a suitable place for an amputation.

It has long been my sentiment, that amputations would have as favorable termination at the knee and elbow, as at the smaller joints, or above the articulation. Many opportunities presented during the campaigns on the northern frontiers, but none within my knowledge was improved to test the correctness of my opinion; while it is here acknowledged, that my own practice was governed by that of the most celebrated surgeons.

The following case of amputation at the elbow is now communicated to remove objections to the joint operation, and encourage the practice of amputation at the articulations where the condition of the diseased limb does not interdict.

On the 4th of last July, at Fort Independence, a Matross had his right fore-arm carried away, by the discharge of a gun, while in the act of ramming home the cartridge. The upper arm was also badly burnt by the explosion. The patient was anxious to have the stump saved below the elbow joint; but upon dissecting up the teguments from the point where they were entire, they were insufficient to cover the stump, and leave one inch below the articulation. It was at once perceived that so small a portion of the bones of the fore-arm below the joint could be of no use. This induced me at the moment of performing the operation, to amputate at the joint, rather than above, contrary to general practice. The experiment is fortunate, and confirms me in the opinion, that objections to the joint operation are groundless.

After making my first incision below the joint, the teguments were dissected up to the articulation; the fore-arm was easily detached from the humerus by a small knife; two and a half inches of skin and cellular substance were saved below the end of the bone, more than sufficient to cover its articulating surface. Five arteries were secured by ligatures, and the lips of the teguments being brought in contact, the wound was dressed after the usual method. The

first dressings were removed on the fourth day, when the lips of the teguments covering the stump were found united by the first intention. In consequence of great secretion and discharge of synovia, so as to wet the dressings throughout, as also the pillow on which the arm rested, I was apprehensive the cure could not be effected by the first intention. In order to encourage a suppuration of the wound, and thus effect a progressive union of the parts wounded, the lips of the teguments were gently separated, slips of lint interposed, and dressing applied in the usual manner. The synovial discharge was so profuse, during the first seven days, that doubts of success were entertained. But after this period, synovial secretion abated, and the union of the muscular parts with the articulating surface of the bone commenced, and by the aid of gentle compression round the end of the stump gradually progressed; the skin and cellular substance, in the mean time, retracted, so as when brought in contact over the bone, to be sufficient only to cover its end. This delay of bringing the teguments into contact appeared to have its use; for as the teguments retracted, they acquired more consistency and firmness. The cure was effected in four weeks. I am not certain, that the precaution of separating the lips of the wound to give freer egress to the synovial liquor, (as was done at the removal of the first dressings,) was either important or necessary; and was I to make a similar operation, the same appearance supervening, the united lips of the teguments would be permitted to remain, and waiting the event for a few days, trust to the opening between the lips necessarily made by the ligatures for the discharge of the synovia, or pus if suppuration should ensue.

From the favorable termination of the above case, (the cure being effected in four weeks,) there is the fullest conviction on my mind, that no substantial objection to the joint operation can exist, that is not overbalanced by the advantages accruing therefrom. This operation, it is true, is not as

simple as to saw the bone above the joint, for it is expected a greater number of inosculating branches of arteries are to be secured by ligatures; a larger portion of teguments than when the bone is divided above the joint, must be saved, some allowance being made for their retraction. But the stump of the arm amputated at the joint is not so tender as when the bone is sawed; it has greater powers from muscles saved, consequently is of more use.

It is obvious to every person, that the stump of the thigh bone, when the amputation is made at its articulation with the tibia, adapts itself better to an artificial leg than when amputation is performed above the joint. The firm cartilaginous articulating surface of the bone will support the weight of the body with less pain to the patient, than the small end of the thigh bone, divided by a saw above the joint.

When the first incision through the teguments is made, no inconvenience is to be apprehended, from saving a large portion below the joint to cover the stump; it is better to save too large a proportion, than too small; for when the wound is in a condition to bring the teguments in contact over the bone, or if it may be thought preferable to bring them in contact immediately after the amputation, (the health of the patient being good,) the retraction will obviate the necessity of removing by a knife, any portion, although the teguments, at first, may appear too full and abundant over the end of the stump.

There is recorded in American practice, to my knowledge, but one case of joint operation, excepting of the shoulder, at the scapular articulation; this is an amputation at the wrist joint, communicated by Dr. Hubbard of Pomfret, Conn.; and it succeeded to admiration. In a late European periodical publication, the joint operation is recommended in preference to amputation above the joint, where circumstances of disease do not forbid. No substantial reasons can be ad-

duced, why integuments will not unite with the cartilaginous surfaces of bones, as well as with the ends of bones divided by a saw. Every physician and surgeon knows, that the cartilaginous ends of the bones, even when diseased, unite, whereby the joint becomes stiff. It is by this means, the principles of life, when the joints are attacked with formidable disease, frequently remedy the complaint, and obviate the loss of the limb by an anchylosis.

Observations on the Tænia Solium; and on its Removal from the Human Intestinal Canal by Spirits of Turpentine. By Robert Knox, M. D. Member of the Wernerian Natural History Society.

[From the Ed. Med. and Surg. Journal.]

Sir.—Since the publication of the learned and elaborate work of Rudolphi on intestinal and other worms, * the numerous disputed points relative to the origin, growth, and propagation of these, seem to have been tacitly given up by medical men in favour of the opinions of that learned and ingenious author; or the inquiry, perhaps, has, from its abstruseness, been deemed beyond the present bounds of science. To the admirers of natural history it would be superfluous to offer any apology for these brief remarks on one species of intestinal worm; and to the practical medical man, few inquiries can be more interesting, as its aim is to elucidate the origin and treatment of an exceedingly obscure and untractable complaint.

It has happened to me to witness the disease of *tape-worm* on an extensive scale, and even, to a certain extent, to experiment on its nature. The observations I have made seem

* Entozoorum, sive Vermium Intestinalium Historia Naturalis. Auctore C. A. Rudolphi.

to throw some additional light on this very obscure subject. Should it appear differently to the readers of your widely circulated Journal, I shall still feel satisfied in having performed my duty to science, by submitting these cases and remarks to the public.

The colony of the Cape of Good Hope is remarkable for the general salubrity of its climate. It enjoys, indeed, almost an immunity from the host of diseases, to which, in other countries, mankind is exposed; to this there are a few exceptions, amongst which may be reckoned the occasional prevalence of *tape worm*. It was long ago remarked by Dr. Sparrman, that the colonists, or more particularly those inhabiting the banks of the great Fish River, "had very little knowledge of one of the most frequent and most troublesome disorders to which they were subject, and that was worms."* He observes, moreover, "that adults, and even elderly persons, seemed more generally troubled with the complaint than children."

This so great frequency of the disease amongst the colonists I have never observed, nor was my attention directed towards this subject previous to October 1819, when *tape worm* became so general amongst the troops as to resemble an epidemic. The greater part of these men had just returned from a short though active campaign of a few weeks; they had been exposed to some rainy weather, and had remained for a short time encamped on the open field; yet these circumstances were productive of no sickness, nor did any ailment occur, excepting the singular prevalence of intestinal worms, and more particularly of *Tænia Solium*.

There are a few general observations which it may be useful to mention, previous to entering on the more detailed account of cases and remarks. The disease was not confined to any particular class or rank in society; intestinal

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* Sparrman's Travels, Vol. II. p. 127.

worms, of one or other species, attacked as well those enjoying every possible comfort, as those exposed to all privations; they spared neither the young nor old, temperate nor debauched, male nor female.

Of the troops employed on the eastern bank of the great Fish River, the proportion of those who became affected with worms, to those who escaped this troublesome complaint, appeared to me about two to five; the *ratio* of those who remained in the colony differed from the preceding, and probably did not exceed one to four. The *Tænia solium* and other worms, more especially *Ascarides lumbricoides*, appeared, *for the first time*, in most of the individuals attacked; they were almost all, without exception, healthy young men, accustomed to much exercise, constant discipline, and regular habits. The greater number of the individuals affected could not remember ever having passed worms, even from their earliest infancy to the period of their attack in 1818. Intestinal worms were passed at this time by men who had lived several years in the colony, and who had not previously been afflicted with them. In one case the gentleman had been *nine* years in the colony before the attack of the disease.

Cases and Observations.

Case I.—Of a detachment consisting of about 86 men, 38 were found, on inquiry, to be affected with worms; of this number, two had the *Ascarides lumbricoides*, and the remainder *Tænia Solium*. The detachment was composed of young healthy men, previous to the appearance of the worms. Those affected became, generally speaking, emaciated and weak, low-spirited, pale, and unhealthy. They laboured under other symptoms, which will be more particularly described in a future case. The cure of all who chose to adopt the means was easily effected by small doses of the spirits of turpentine, after the failure of purgatives and various other remedies.

Case II.—One of the above mentioned detachment, whose name I think was *Gardiner*, had resorted to a variety of methods in order to rid himself of so troublesome a complaint, but ineffectually. He

had restricted himself entirely to a milk diet for about three weeks, with the effect of arresting the growth of the *tænia*, as few or none of the detached joints appeared in his stools during the continuance of this regimen; they reappeared immediately on his returning to the use of animal food. The spirits of turpentine were prescribed for him, in the dose of two drachms morning and evening. He, almost immediately after, voided by stool a portion of a *tænia*, consisting of about 240 distinct joints, each about $\frac{3}{4}$ of an inch in length; the unpleasant hanrassing symptoms which generally accompany the presence of *tænia* in the human body immediately left him, and did not return.

Case III.—A middle-aged man (a half-pay officer) had been affected with *tænia* for eight years, during which long period, an incredible quantity of drugs had been prescribed for the complaint, and taken without any permanent advantage. He had been under the care of several medical men, and his constitution was greatly impaired. During these eight years, he had been in the constant habit of passing detached joints of the *Tænia Solium* by stool, in great quantities, and his existence had become, in consequence of this and other complaints, truly miserable. Two drachms of spirits of turpentine in a little water were taken twice a day, for four successive days. He now passed the *tænia* in large connected masses; the symptoms of disease disappeared, and his health returned.

Case IV.—In this case, (also an officer,) the *tænia* appeared suddenly, whilst the individual enjoyed perfect health. He had never passed any worms previous to the present attack. The symptoms, as in most others, were acute headache, dyspnœa, fetid breath, grinding of the teeth, constant itching of the nostrils, stiffness of the lower jaw, sensation of pain in the temporal muscles, increased flow of saliva, sickness and pain of stomach, pains in the chest and bowels, slight tenesmus, paleness, general debility, emaciation. The complaint was observed to be much aggravated by the use of animal food, and a vegetable diet was found effectual in repressing the growth of the *tænia*, but did not succeed in removing the disease. A powerful dose of jalap and calomel was prescribed, with the view of expelling, at least, the detached joints of the *tænia*, if not the worm itself. It proved useless in either way, for it neither expelled the worm entire, nor any of its detached joints. The cure was finally effected by the spirits of turpentine.

It would be tedious to enumerate more of the cases which occurred, as they bear to each other so close a resemblance; but there are circumstances regarding the action of the re-

medy employed, and the exciting cause of the complaint, which merit minute discussion.

It has been generally allowed by medical writers, that there is scarcely any part of medical science more obscure than the origin of intestinal worms. The works of the ancients contain no accurate observations on this interesting point, and the labours of later authors tended only for some time to involve the subject more and more in obscurity and error. Much was to be expected from the exertions of the natural historian, and from the aid of the microscope in the hands of men of science, accustomed to habits of correct observation, and to the impartial investigation of nature. This class of men *has* done much towards elucidating the nature of intestinal worms, or, speaking more generally, of *entozoa*, the name by which worms living within other animal bodies are distinguished. But great difficulties remain to be overcome, and the opinions maintained by the most accurate writer on this subject, (Rudolphi,) appear to me quite untenable.

A simple enumeration of the various causes which have been assigned for the production of intestinal and other worms, would convince an impartial reader, that such were inadequate to produce the effect, and were supported by men, who did not give credit to their own doctrines. The extreme difficulty attending such investigations will be made manifest by remarking, that the so justly celebrated Linne entertained notions regarding the origin, habits, and growth of *tænia*, which Pallas and Rudolphi have since proved to be entirely erroneous. It is unnecessary here to discuss the opinions of a host of writers so ably combated and refuted by these authors. It seems preferable rather to inquire into the causes which gave rise to intestinal worms, in so great a number of otherwise healthy individuals,—an inquiry fraught with interest to the medical practitioner; since next to the

removing disease when present, the most important subject for investigation is its exciting cause.

The best authors have remarked, that, for the production of intestinal worms, a certain predisposition of the body is necessary, which foreign writers call a "*diathesis verminosa*," and sometimes a "*dispositio verminosa corporis.*" This they describe as originating in scanty, unwholesome vegetable diet, and hence the frequency of intestinal worms amongst the poor; but they also assert, that debility, from whatever cause arising, may give origin to the same complaints. In confirmation of these opinions, they remark, that the inhabitants of low marshy countries, as Holland, are more subject than others to intestinal worms. All preceding theories having been disproved by minute microscopical inquiry, naturalists have admitted the preceding statements, and explained the generation of worms in the human body, by a process totally dissimilar to what is known to take place in the production of all other animals, and somewhat resembling the growth of mushrooms, from a *compost* employed for that express purpose. Nor do the careful expressions of Rudolphi diminish the difficulty, or explain away the absurdities attending the admission of such an *hypothesis.* "Organic particles," he observes, "are required for the production of *entozoa*, in the same manner as we find the classes of animals called *infusoria*, and *phytozoa*, and some *fungi*, are produced." In parts, he further observes, which have been organized, (*partibus organicis,*) as well animal as vegetable, and which have been macerated in water for some time, innumerable animalcules called *infusoria* are known to arise, and to be produced by a process not unlike putrefaction.

It is with diffidence that I offer, in opposition to the opinions of such accurate observers of nature, the following objections: Debility presents itself to the medical practitioner daily in a hundred forms, without being accompanied by in-

testinal or other worms. On the contrary, these appear in the strongest constitutions, particularly exemplified by the cases detailed at the commencement of these remarks. The individuals alluded to were, with few exceptions, young, healthy, active men. The climate of the Cape is remarkably dry, forming, as it were, the counterpart of Holland, and Hasselquist* says of Egypt, that the inhabitants are much afflicted with *tape-worm*, a practitioner in Cairo assuring him, that two-thirds of the inhabitants of that city were afflicted with them. Moisture, therefore, can have little effect in the production of *tænia*. Neither can a vegetable diet be blamed for its production, since many months had elapsed during which vegetables, bread excepted, formed no part of the diet of any of the individuals alluded to in the preceding cases.

As *tæniæ* and other worms are occasionally found in fish, some writers have asserted that they are thus transferred to the human frame. The observations of naturalists have shown, that the *tæniæ* observed in fish and man differ essentially; and in addition, it may be remarked, that of the hundreds whom I have known to be affected with *tænia*, none had tasted fish for the period of at least six months previous to the appearance of the worms, and many not for years. It remains, therefore, to be explained, how so many young, healthy, active men, became suddenly affected with *tænia*, for assuredly no theory hitherto offered on the subject of intestinal worms throws any light on their origin in the present instance. From the disturbance worms generally create in the human frame, we should be inclined to adopt the conclusion, very different from that of preceding writers, and forming almost an exact counterpart, viz. "That intestinal worms are not natural to man." This opinion is confirmed

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* Hasselquist's Voyages and Travels, p. 386.

by the constant efforts nature makes to throw off the disease,—efforts more or less obvious in different individuals, but perhaps existing in all. The *Filaria medinensis* has been classed with the *entozoa*, though several writers allow that it naturally exists in the wells and rivers of warm countries.

Intestinal worms are introduced into the human frame mixed with the food or drink, and, finding in the intestines an apt place for their existence, they there live and thrive; but they do not arise from a weak and injured digestion, and a consequent combination of matter capable of converting itself into intestinal worms.* Were we satisfied with such explanations, the origin of man, and all other animals, would be readily accounted for, from "a peculiar arrangement and combination of organic molecules placed under peculiar circumstances;" the story of the serpent *Python* would be no longer a fable.

Perhaps the strongest objection hitherto offered to the opinion, that *entozoa* are not generated within the bodies of man and other animals, but are transferred to them through the medium of the *ingesta*, arises from the fact, well ascertained, that intestinal and other worms have no where been found excepting within the *viscera* of other animals. But to this it may be observed, that the repeated errors committed by microscopical observers have brought this mode of observing natural phenomena into a certain degree of disrepute. The indefinite nature of the theory supported by late writers, that *entozoa* are generated within the *viscera* of man by a process our food undergoes when not properly digested, has retarded the advancement of knowledge relative to these animals. It has done worse: it has prevented minute inquiry into the immediate exciting cause of intestinal worms,

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* "Dissimilatio vermes gignit.

"Vermes ex dissimilationis processu in corpore animali debilitato obtinente oriri statuit." RUDOLPHI.

into the particular article of food which more immediately produces them; and it has spread widely a few vague notions, that unwholesome coarse food, whether animal or vegetable, when introduced into a weakened stomach, will at all times give rise to the disease of worms. It seems of importance, therefore, to reduce the subject to a few determinate points, and, by subjecting the inquiry to a stricter analysis, enable succeeding observers readily to prove or confute the existing theory.

It may, I think, be admitted, that intestinal worms (or the matter capable of producing them) can be introduced into the *viscera* of man and other animals only with the food or drink. That they do not arise from the latter, may be conjectured from the following fact, that individuals using, for a series of years, water drawn from the same sources, have not been afflicted with *tænia* or other worms; nor did these appear until other causes, to which, with more probability, they might be referred, were also present.

The cases of *tænia* detailed in the commencement of this paper, occurred in a body of active healthy young men, subjected to the same discipline and privations, and using, with few or no exceptions, the same sort of food and drink. These circumstances merit peculiarly the notice of the professional reader, as it seldom happens that an experiment (for such it seems to me) can be made so extensively in civil life, where the habits of no two individuals resemble each other,—where the food and exercise of the sick are submitted to no precise rules,—and the dissimilarity in age, constitution, and previous habits of life, renders all general conclusions necessarily incorrect.

In men so situated, we must look to some general exciting cause of disease, the explanations hitherto offered of individual cases being totally inapplicable. The food of these men (for to it we must ultimately refer the disease) consisted chiefly of unwholesome meat, the flesh of overdriven.

starved, and unhealthy oxen, reduced often to a mere skeleton, by fatigue, want of food, and exposure to the cold rains, which are observed to sicken and destroy most of the horned cattle and sheep which have not preserved their condition throughout the winter. The use of this sort of food, from peculiar circumstances, was unavoidable. I shall not here dispute the point, whether the *tæniæ* were transferred, as completely formed animals, from the unwholesome and *diseased* meat, to the stomach and intestines of man, or are there generated; it is sufficient to have established the point, that they arise from the use of unwholesome animal food,—from the flesh of animals which have been diseased.

I have avoided, as much as possible, detailing any minute facts regarding the natural history of *tænia*, and other intestinal worms, supposing most practitioners in medicine to be acquainted with the leading *phenomena* of these animals. The following brief remarks I therefore submit to the naturalist, and claim his indulgence for any trifling error which may occur.

Various ridiculous opinions were formerly entertained regarding that variety of *tænia* called *Solium*, most of which have been successfully combated by the ingenious and accurate Rudolphi. It is now known that four individuals of the species *Tænia Solium* have been discharged by the same patient; hence the obvious impropriety of the name. The theory formerly upheld, regarding the indefinite growth of joints to supply the place of those detached from the body of the *tænia*, and passed by stool, has been rendered exceedingly doubtful. The *Tænia Solium* seems to be regenerated rather by an evolution of joints already existing, or by the production of new joints near that extremity of the worm where naturalists have proved the head to be placed. It is probable, therefore, that Rudolphi may be correct, when he states, that the joints of the *Tænia Solium* do not increase in number, but in length; or we may assent to the opinion of Pallas,

who seems to think that there may be a re-production of joints towards the head extremity of the animal.*

It is no longer disputed by naturalists, that in the small perfect *Tænia Solium* there are constantly found a distinct head and tail joint, which is not perforated by any vessel or tube; but as the animal, when suffered to come to maturity, secrete joints in great numbers, which pass off with the *fæces*, it is obvious, should the observations of naturalists be correct, that the tail joint must *first* be detached, and unless regenerated at a future period, ought never afterwards to be found in the animal. This difficulty has been slightly touched on by preceding writers. It seems to prove that the longevity of the animal is considerable, and that its original habits must have become altered by residing in the human intestines, for the secretion of the tail joint can hardly be considered as a natural process. A change of localities is observed to exert a certain though limited influence even over man and the class *mammalia*; but over animals of obscure vitality, and over the vegetable world, (to which *entozoa* bear close resemblance,) the power of external agents knows no limits. By a change in their place of abode, by the slightest change of climate, or culture, they not unfrequently become so remarkably different from their original or parent stock, as with difficulty to be recognised. Hence it probably happens that the *tænia* has never been detected but in the intestines of man and other animals.

Intestinal worms infest graminivorous quadrupeds, and particularly the horse. They appear generally during winter, and quit him as soon as he is permitted to regain his flesh and strength on the spring pastures.† The presence

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* It is a remarkable fact, that no well authenticated case exists of worms being found in the intestines of the fœtus or infant at the breast

† When young sweet grass cannot be obtained, the worms are generally expelled by a dose or two of melted fat, taken from the tail of the Cape sheep.

of worms in the intestinal canal of man may be suspected when a few of the symptoms already enumerated are present; nor ought the practitioner to doubt the correctness of his diagnostic, on finding that a few doses of a purgative medicine do not bring off worms by stool. The *Tænia Solium* will betray its presence in the intestines by the separation and discharge of distinct joints. When other varieties of *tenia* are suspected, the patient ought to have recourse to *anthelmintics*. The *dyspnæa* occasioned by the *Tænia Solium* is a remarkable symptom, and may in some cases lead to an early detection of the complaint; but the superabundant secretion of *saliva* is connected with many disorders of the frame and cannot be deemed a test either of the presence of worms, or of the recent use of mercury, but rather as a symptom of general bad health.

A variety of drugs and *methods* have been recommended for the expulsion of *tæniæ* and other *entozoa* from the intestines of man; these may be reduced to three heads.

1*st*, Mechanical remedies, as *pulvis stanni;* large doses of *aloes* taken in the form of pill, (which have been known to expel *tæniæ* from the intestines,) probably act in the same way. This method sometimes succeeds, but is exceedingly uncertain.

2*dly*, Drastic purgative medicines which occasionally are found successful in expelling the *tænia*, but whose operation is attended with disagreeable symptoms, and not unfrequently irreparable injury to the constitution. Milder purgatives are often exhibited, preceded by *bitters* and *aromatics*.

3*dly*, *Anthelmintics* or drugs which destroy intestinal worms, by being inimical to their vitality. Of these the most efficacious is *spirits of turpentine*, given either alone, or compounded with empyreumatic animal oil, as in the celebrated preparation of Chabert. I have generally found, that from one or two drachms of ol. terebinth. given in a little water, morning and evening, for three successive days,

were sufficient to destroy the *Tænia Solium*, (even in the most obstinate cases,) and cause it to leave the intestines without the aid of any purgative medicine. The practice, however, of exhibiting a little castor oil about noon of each day, is unobjectionable, and may be useful, as the turpentine never purges the patients. The narcotic effects produced by turpentine on *tænia* and other worms may be judged of by the fact, (ascertained by several experiments,) that when one drachm only has been taken, and the patient has declined continuing its use, an immediate stop is put to the secretion of separate joints by the *tænia*; the vigour of the worm is destroyed; it sickens, and in proportion to its unhealthy state, does the patient regain his health and strength. Should the turpentine not be repeated, the worm recovers slowly, and after the lapse of an uncertain period, (two or three weeks,) the usual secretion of joints recommences. A large dose of spirits of turpentine, from four to eight drachms,) produced in many patients unpleasant symptoms, such as intense headache, vertigo, and a confusion of ideas, amounting to temporary delirium. Neither wine nor spirits should be drank during the use of turpentine, lest stranguary be produced. Food ought to be avoided on the mornings of using the medicine, nor should any be taken in the evening. The turpentine has been found most rapid in its effects, when taken about 8 or 9 A. M.

Oil of turpentine has been used with success in cases of *tænia* on the Continent, and more particularly in Germany, for at least fifty years. To it the celebrated preparation of Chabert owes its remarkable efficacy. *Ascarides Vermiculares* are easily expelled by the same drug; and it is probable that no intestinal worm will remain in the intestines, if the system be kept under the influence of oil of turpentine for a few days.

Many alarming symptoms have been known to arise from the presence of worms in the intestinal canal, particularly

nervous disorders, as epilepsy and convulsions. It is not improbable that *chorea* may often depend on the presense of worms in the intestines, and its removal by the continued use of purgative medicines would seem to confirm this conjecture. I have seen a high degree of nervousness existing in many patients affected with worms, and have found that this nervous state disappeared with the removal of the exciting cause.

REVIEW.

Practical Illustrations of Typhus Fever, of the Common Continued Fever, and of Inflammatory Diseases, &c. &c. By John Armstrong, M. D. Physician to the Fever Institution of London; with Notes, Critical and Explanatory, By Nathaniel Potter, M. D. Professor of the Theory and Practice of Medicine in the University of Maryland, &c. &c. First American from the Third English edition. Philadelphia. 8vo. pp. 468.

It has been tauntingly said that the science of medicine continually progresses, but moves in a circle; and its most devoted cultivators must confess that there is some foundation for the reproach: else why is it that we so frequently recur to the doctrines and experience of former ages, after having been amused by a succession of theories equally fascinating in their day, and equally subversive one of the other. A part of this vaccillation is no doubt inherent in the very intricate nature of the science; but a part, also, may be attributed to that pride of system, which leads to explain all by a few agents, and that spirit of party which is chiefly intent on giving celebrity to a school, or gaining individual reputation by specious theories and novel doctrines. Fever, more than

any other department of medicine, offers great inducements for the display of ingenuity and fancy in system-making; and, accordingly, a history of the various doctrines that have prevailed on this subject would comprise, with little exception, the doctrinal history of the science. The multiplicity of their symptoms, their endless diversity and combinations, constituting a great variety of type and character; their frequent complication with other diseases, and, indeed, forming an essential part of the derangement; their constant recurrence in all climates and countries, and finally, our views on general pathology being much influenced, we might almost say derived, from our doctrines on fever; are so many reasons why this class of diseases have occupied so large a portion of the attention of physicians in every age, and their doctrines have been modified or altered by each succeeding writer who laid claim to the character of an original thinker, or to the credit of being the chief of a new sect. In this continual fluctuation then, it is not surprising if the restless and enquiring mind, always eager to subvert prevailing error and discover correct principles, should sometimes be brought back to the opinions of former times, and find them more consonant with the phenomena of disease, than those that had fascinated and bewildered the preceding age; and thereby prove that every change of system is not an advancement of the science.

The labours of several recent writers on fever exemplify these remarks. At this time, when physicians seem entirely to have overlooked the complication of local inflammation with primitive fevers; to doubt whether fevers are ever truly inflammatory; and in their treatment have almost banished the employment of blood letting; the investigations of these authors have excited a general and renewed interest to this subject. This new direction which they have given to medical inquiry appears calculated not merely to lead us back to the opinions and practice of Galen and Celsus, of

Riverius, Sydenham, Mead, Huxham, Grant, Pringle, D. Monro and others, who considered fevers as frequently inflammatory, requiring depletory means, and had frequent recourse to venesection in the treatment of pestilential, malignant, and typhoid fevers; but there is some danger that many physicians, in their exclusive devotion to this view of the subject, will encounter the opposite extreme, and adopt the opinion anciently maintained by Erasistratus, and, more recently by Ploncquet and Clutterbuck, that all fevers depend on inflammation of some part; and recur to bleeding with as much eagerness and indiscriminate profusion as did Botallus and his followers.

The work, whose title stands at the head of this article, has we think contributed more than any other to bring about this change in medical opinion. This has not arisen however from the novelty of the author's views, for most of his leading principles may be deduced from the writings of Clarke, Mosely and Jackson, and are more distinctly inculcated in the writings of our countryman Rush, whose observations he has wholly omitted to notice, except once on a minor and incidental point; which is the more to be regretted, as the observations of that illustrious physician would have afforded him from the very interesting manner in which he has treated the subject, frequent opportunities of pointing out remarkable coincidences of opinion. In asserting the claims of Rush and others, to a participation in these doctrines, we would not wish to be understood as detracting from the merits of Dr. Armstrong, as an able observer and profound thinker; his book, throughout, bears the stamp of a master genius; his illustrations are peculiarly striking, and drawn, for the most part, from classic and elevated sources; his style is vigorous, lively, and elegant; and the work altogether calculated to interest the reader little less than the most finished pictures of fiction. He insensibly hurries on from doctrine to doctrine, with feelings too vividly excited

to apply that cold scrutinizing examination, which after all, must test the subject-matter of every medical performance; and which, we think, will impute to our author too great a proneness to establish distinctions on confined and limited data, and to submit every disease to the same order and succession which he has appropriated to others. Notwithstanding these faults the work is confessedly the result of a rare combination of observation and ingenuity, and is destined to rank high in medical literature. Although it has been before the public more than three years, and is known to many of our readers, yet, as it has lately been re-published in this country, with notes by a Baltimore professor, we deem it proper, at this time, to give a summary of its contents, and examine the general tendency of its doctrines; in the hope, that such as are still unacquainted with them may be induced to render themselves familiar with a work that abounds with much sound doctrine and practical instruction.

Armstrong divides pyrexial diseases into three orders. The first comprehending fevers from contagion; the second, those arising from marsh and similar miasmata; and the third, those proceeding from the vicissitudes of the weather and other ordinary causes, as local irritation &c. This division of fevers strikes at the root of all nosological arrangement. It is not on this account that we would object to it, for we think it would be an important point gained, to lay aside this medical *regime*, which has continued to retard the improvement of the science by exhibiting as land-marks, principles that are often as problematic as the ulterior developments of such systems; yet we fear that physicians are not sufficiently agreed on the causes of febrile diseases to found an arrangement on such data. The author, for instance, gives as the characteristic of typhus that it arises from contagion, whilst a very respectable portion of the medical community contend that it never proceeds from this cause, and very few indeed, allow that this is its sole origin.

Even Huxham, Pringle, Lind and others of great authority, while they believed that the disease might be propagated in this way, afford indubitable proofs that it frequently arises from other causes. And, moreover, there is something so insensible and inscrutible in meteorological phenomena as the cause of disease, that it is very doubtful if we shall ever arrive at the precise cause of fevers. Probably these phenomena aid, more or less, in the production of all febrile diseases, and of course cannot with propriety be assumed as the distinctive mark of any.

Having designated typhus as a disease proceeding solely from contagion, he proceeds to divide it into three varieties; namely, the simple, the inflammatory, and the congestive, typhus. The simple typhus is the least complicated form of the disease, in which the febrile excitement or hot stage is completely developed, and in which there is no decided marks of topical inflammation. Like all fevers that are fully developed, it has its first stage of oppression, a second of excitement, and a third of collapse.

The first answers nearly to the atony of Cullen and the torpor of Darwin; the second is the hot stage of authors; and the third constitutes not merely the sweating stage, but comprehends that condition of the system which supervenes on the subsidence of the excitement, either exhibited in the gradual cessation of the violent symptoms of the preceding stage, leaving the system in a state of relaxation and enfeebled action which finally terminates in convalescence and health; or that train of alarming and mortal symptoms that precede the unfavorable termination of the disease. He is inclined to admit that this form of typhus has a tendency to observe a determinate course and duration; but that the restrictions are to be applied with much greater latitude than in small-pox and measles. This variety terminating sometimes on the 10th, generally within the 14th or 21st days, and occasionally extending to the 4th, 5th, or even 6th week. The

doctrine of critical days, however, he wholly discards, believing with Celsus and Herophilus,that they have no other existence, than in the superstition of the Pythagorean philosophy.

Simple typhus conjoined with symptoms of visceral inflammation, constitutes the author's inflammatory typhus. The inflammatory affection, he considers, either as the effect of the excitement of the fever; or produced by cold, or other common cause of fever, operating with the contagion, but never as the cause of the febrile affection. The organs most usually affected, are the brain and spinal cord, the thoracic and abdominal viscera, either separately or combinedly. For the purpose of exciting attention, to the often insidious character of this variety of fever; he divides it into the acute, and sub-acute forms; which terms are employed relatively, denoting higher and lower degrees of the same morbid state. The acute form generally occurs early in the fever, and is marked by fixed pain in the head, chest, or abdomen, with great quickness of the pulse, dryness of the tongue, anxious breathing, and much general oppression.

The sub-acute form usually steals on, by almost imperceptible approaches after the third day of the second stage, and is characterised by little or no pain in the part affected, pulse very frequent, respiration hurried, tongue parched and foul, with general oppression. The appearances exhibited on dissection, are nearly the same in both forms, only that the traces of inflammation in the affected organ, are generally deeper and more extensive in the acute, than the sub-acute. In delineating the characters of this variety, the author attributes the great pain in the spine, as well as that of the extremities, (which is sometimes so excessive as to be mistaken for rheumatism,) to inflammation of the spinal marrow : the pain the patient experiences on violently moving the head, is attributed to inflammation of the brain.

His third variety of the congestive typhus, is distinguished by the hot stage not being at all, or only imperfectly deve-

loped, and by simultaneous signs of venous congestion in one or more of the internal organs. Different from that which is observed in the simple and inflammatory typhus, the stage of excitement without the interference of art, never emerges at all, or only does so very imperfectly; the energies of the system, being either nearly extinguished by the venous congestion, or so much oppressed, as to be unable to create an universal excitement. The local accumulation of blood in the veins, obstructs from the beginning the common series of febrile phenomena, and there is in consequence, either a total want of morbid heat, or a concentration of it in some particular part of the body; whilst others are considerably beneath the natural temperature. All the forms of this variety, may be recognised, by the depressed state of the heart and circulation, the uneasiness in the head, the anxiety of the præcordia, the peculiar condition of the temperature and skin; the total want of excitement, or its partial and unequal development; the suspended or vitiated secretions; and the local load and general oppression.

Their various modifications, may be divided, into the regular and irregular; in the former, there is no arterial excitement whatever; in the latter, there are very feeble arterial excitements, united with a general depression of the system. Their most violent forms, sometimes resemble apoplexy in their symptoms; to which, indeed, they have a near affinity in their pathology. The venous system is more immediately and chiefly concerned in their phenomena; and the arterial system, in those of the simple and inflammatory typhus.

In the simple excitive, and in the inflammatory forms of fever, the action of the heart and arteries is increased; but in the congestive forms it is diminished; and this difference in the action of the heart, together with the high temperature of the two former, and the low temperature of the latter, constitutes the most distinct mark between diseases of excitement and congestion.

Such are Dr. Armstrong's explananations of his congestive variety of typhus, which, it must be confessed, are not as satisfactory as his delineations of the two former varieties. As a whole, it is extremely ingenious, but we fear partakes too much of a desire to generalise into a system, rare and extraordinary occurrences. We do not deny that febrile disease is sometimes smothered, oppressed, and unable from some cause, perhaps venous accumulation in the large vessels, or the violent impression made on the nervous system by the suddenness or force of the febrile poison acting on peculiar habits of body, to produce the usual arterial excitement, and even to prove fatal without exhibiting any sign whatever of such excitement. This last circumstance has sometimes happened in our most malignant epidemics of yellow fever; in some cases, persons falling in the streets and suddenly dying as from the attack of apoplexy or the effect of lightning. Such uncommon occurrences are, however, rather to be viewed as anomalies in pathology, instructing it is true, and therefore to be known and studied, but not as warranting us to deduce from them a system of principles to be applied to all fevers, and constituted as one of their essential and possible conditions. Sydenham, Jackson, and Clarke, whom the author has quoted as noticing this form of fever, we think, conceived such views of the subject; and Rush, whom he might also have quoted as treating more distinctly of this form of fever than any preceding writer, never thought of attributing it to venous congestion merely, nor did he believe it to occur in any other than the most intense grades of fever.

In concluding his pathological observations on typhus, the author objects to the tendency some late writers have shown to consider, like Erasistratus of old, the febrile affection as purely one of inflammation. He thinks by fixing upon no particular tissue as its seat, in not limiting its character merely to inflammation; but in tracing its effects through all

the body, under a simple, inflammatory, and congestive variety; an approach has been made towards a more correct generalization of the leading phenomena of typhus and other febrile diseases.

The same division of typhus into varieties and stages, is observed in detailing the treatment. In simple typhus there is always a first stage of oppression, marked by the retrocession of blood from the surface, by certain degrees of internal venous congestion, and a disturbance of the general balance of the circulation; when the practitioner must not be deterred by the appearances of debility, from the use of evacuants, for the system is merely oppressed by a kind of preternatural burden, and not really in a state of exhaustion. After premising an emetic, the lower intestines should be evacuated by a large cathartic injection, to be followed by an active purgative, so as to obtain four or five full dejections. The purgative must be repeated daily during this and the succeeding stage of excitement. The medicine that in general answers this purpose best, is calomel in full doses, aided, when necessary, by the after administration of Epsom salts, jalap, rhubarb, or castor oil; or if preferred, by combining the calomel with jalap or rhubarb. These measures should be seconded by the warm bath, which the author very justly views, with Marcard, of Germany, as antiphlogistic, and may be employed with equal benefit in the stage of excitement, together with tepid drinks and an antiphlogistic regimen. On the supervention of the second stage, the cold affusion will be found to be a powerful means of diminishing excitement; but the chief dependance is to be placed on obtaining full and repeated alvine evacuations, by the daily exhibition of cathartics. In the milder cases, little will be needed in the stage of collapse: the powers of nature, in general assisted by light nutriment, being fully adequate to the recovery. One or two moderate dejections daily, obtained by mild laxatives, if necessary, will be sufficient, except where the bowels have been neglected in

the earlier stages, when brisk cathartics, even at this late period are called for, to free the intestines from fecal accumulation; the patient's strength at the same time being supported by a moderate allowance of wine and light nourishment.

The acute species of inflammatory typhus, is to be combatted by general venesection, if it can be employed as early as the third day of the stage of excitement; but it is never to be resorted to where there is the least sign of collapse. The blood should be taken from a large orifice, so as to produce an impression on the system, and a tendency to syncope Dr. Armstrong is not an advocate for large and repeated venesection in inflammatory typhus, having usually seen one or two moderate bleedings sufficient, when followed up by purgatives, blisters, leeching, and calomel as an alterative. In the sub-acute species, bleeding can be resorted to with safety at a much later period than in the acute; but in either, when there is the least doubt as to the propriety of general venesection, it is better to employ local bloodletting, which Dr. Armstrong's experience leads him to consider a powerful means, producing a more decided impression on the circulation, than the same quantity drawn from a vein; and to trust to the aid of purgatives, the warm bath, blisters, and especially to the free use of calomel, so as to obtain its specific effects.

It is only in the first stage of the highly congestive typhus, that general bloodletting is admissible, with the view of relieving the local congestions, and of restoring the natural balance of the circulation. The practitioner must not fix upon a determinate quantity of blood to be drawn, but rather be guided by the effects produced. Sometimes a few ounces will be quite sufficient, and at other times ten, sixteen, twenty, or even more will be required to relieve the topical engorgements. The general circulation, and the heat and action of the skin, is to be restored by having immediate re-

course to the warm bath, frictions, external heat, tepid drinks, and occasionally moderate quantities of wine, if the circulation remain languid, especially after bleeding. Though bleeding and the warm bath are means of the first efficacy, they should be followed by others with as little loss of time as possible. The bowels ought immediately to be evacuated by very large stimulating enemata, and then by full doses of calomel and jalap, whilst a large blister should be applied over the region of the stomach or liver. In the milder degrees of the disease, bloodletting should be altogether omitted, and the case trusted to the assiduous employment of the other means.

The author's directions for meeting untoward symptoms, complications, and relapses, which last he attributes to six causes; namely, re-infection, neglected bowels, errors in diet, diffusible stimulants, too early or too much exertion, and the influence of a low or variable temperature in the convalescent's apartments; are highly judicious, but would occupy too much space to detail in this place.

The treatise on the plague, is an attempt to show that this disease exhibits the same stages and varieties that he has attributed to typhus. He was not practically acquainted with the disease, and has been obliged to reason from the facts furnished by others, which he has done with great acuteness, proving from the most authentic sources, as the works of Sydenham, Mead, Russel, De Mertens, Faulkner, &c. that it is frequently a disease of high excitement, requiring copious and repeated depletion; and like the yellow fever, more frequently presents the worst forms of the congestive variety, than either typhus or the more ordinary fevers.

Under the denomination of common continued fever, he includes those different forms and grades of fever that arise from the influence of the weather, and a great variety of ordinary causes; excluding specific contagions, and embracing symptomatic fevers, or the phlegmasiæ of Cullen. This part

of the work is a masterly refutation of the absurd doctrine that considers every grade of diseased action as a new and specific disease: and if the author could once discard the delusion of contagion, as applied to typhus, plague, and other endemial diseases, (for after all, his work does not contain a fact on this subject, which cannot be satisfactorily accounted for on the received doctrine of infection, or atmospherical vitiation,) he would come distinctly to the result long ago maintained by Rush, and which Armstrong's book inculcates even in despite of its author. We do not deny that advantages are gained by the separation of disease into genera and species; such distinctions serve as convenient resting places for the learner, and enable him to seize more concisely the leading traits of each modification: but the futility and folly of rigidly adhering to them at the bedside, has been strongly evinced by pretending to point out radical differences between types of fever, that frequently combine in the same individual case, so that the patient is made to sicken of one fever, and die of another. The ingenuity of Armstrong has been unable to furnish any other distinction between his common continued fever and typhus, than the supposed contagious attribute of the one, and a detail of symptoms differing in nothing from those of the other, excepting in their milder character, and more regular developement. Even the two symptoms which he chiefly depends on as marking typhus; namely, the greater disturbance of the sensorial functions, and the dusky tinge of the skin, are only made diagnostic by their degree and more frequent occurrence, and not as something that is superadded: and he finally confesses that the distinctions he has endeavoured to establish as marking these two diseases, are most appropriate to their first and middle stages; for in the last stage of both, many of the symptoms so approximate, as to make them more nearly resemble each other. The epidemic that lately prevailed in Britain and Ireland, presented great diversity of grade and character; and Dr.

Armstrong has been obliged, in order to vindicate his doctrine of the contagious and specific character of typhus, to explain the fact, by supposing that that epidemic was composed of three distinct fevers; namely, the typhus, the common continued fever, and a low fever of irritation, arising from the crowding together of many human beings in confined and filthy situations. This explanation is wholly gratuitous, inasmuch as the author has failed in showing the specific character of each: and is moreover contradicted by the ablest writers on epidemical diseases, particularly Sydenham, who, after ample and reiterated observation, maintains the identity of an epidemic prevalence, and even shows the propensity of accidental disease to assume the garb of the prevailing malady.

After indicating the simple, inflammatory, and congestive varieties of the common continued fever, and laying down the method of treatment, which is much the same as that for typhus, excepting that in general it requires more active depletion, especially by bloodletting; he proceeds to exemplify the doctrine, that the different phlegmasiæ are so many forms of the common continued fever; and that the local inflammatory affection, is the effect of the general excitement of the vascular system, implicating the weakest organs, by sending unusual quantities of blood to them, by which their circulation becomes disordered, and the local inflammation is the consequence. He contends, that the febrile excitement is always produced in one of the three following ways; namely, by some general shock occasioning internal accumulations of venous blood, which, in their turn, rouse the heart into increased action, and finally augment the heat; by some local disturbance or irritation, which, from that known but inexplicable connection between the nervous and vascular systems, operates on the heart, and thereby increases its action, and the animal heat also; or lastly, fever may be induced by some stimulus, which, at once, from its impression

on the nervous system and thence on the heart, raises the pulse and the temperature to an unnatural height. The same doctrine is inculcated by Rush, in the following words: All ordinary fevers being seated in the blood vessels, it follows, of course, that all those local affections we call pleurisy, angina, phrenitis, internal dropsy of the brain, pulmonary consumption, and inflammation of the liver, stomach, bowels, and limbs, are symptoms only of an original and primary disease in the sanguiferous system. The truth of this proposition is obvious from the above local affections succeeding primary fever, and from their alternating so frequently with each other. But he excepts from this doctrine those cases of primary affections of the viscera, which are produced by local injuries, and which, after a while, bring the whole sanguiferous system into sympathy. Armstrong, on the contrary, carries the doctrine throughout, and maintains, that local irritation induces fever by increasing the heart's action, through the intercourse which exists between that organ and the nervous system.

The author's general views of the character of the phlegmasiæ, may be gathered from the following paragraph:

In common febrile disorders, attended by topical inflammations, there are usually three stages similar to those of typhus. The first is marked by a retrocession of blood from the surface, and a consequent congestion internally. This stage, however, is generally of very short duration, and is not in an exact ratio, even as to degree, with the consecutive one of excitement, in which the local pain, quick pulse, and increased heat, are the most conspicuous phenomena. In the acute forms of inflammation, the stage of excitement is generally of short duration, sometimes terminating in less than twenty-four hours, and seldom exceeding more than three days. Its natural tendency is to produce universal collapse and derangement of structure, which are the most essential parts of the third and last stage, in such affections.

It must, therefore, be evident, that in all acute inflammations of the viscera, the time is very limited in which decided depletion can either be useful or admissible. This, however, is not the case with those visceral inflammations, which assume the sub-acute character; for in them, evacuations may often be employed with advantage, several days after the commencement of the inflammation. The distinction, then, between the acute and sub-acute varieties of the inflammation, must be of very great practical importance; and it is much to be lamented, that it has been disregarded by systematic writers, whose descriptions and directions have great influence over the young and inexperienced members of the profession.

His method of treatment is also somewhat peculiar. He thinks it is a common error of practitioners to bleed too frequently in the progress of inflammatory affections, and yet without sufficient decision. The better plan is to abstract blood, until some impression is made on the vascular system, either inducing syncope or a tendency to it, and to repeat the venesection soon after to the same extent, if the first has not produced decided and permanent relief. By this procedure, much less blood will be abstracted, and the patient's strength less exhausted in subduing the disease, than in the ordinary way of taking an arbitrary quantity, and repeating the operation several times in the course of the disease. In those cases where the state of the patient, or the peculiarity of the disease, will not admit of practising bloodletting to this extent; after abstracting a moderate quantity from the arm, he advises to have recourse to local bloodletting, which, on numerous trials, he has found to induce faintness by the loss of very moderate quantities, and to be remarkably efficacious in subduing excitement. The venesection is to be followed up by active cathartics, and when these have produced their influence, blisters near the part

affected, and the speedy saturation of the system, by calomel combined with opium, will mostly complete the cure.

Dysentery, he contends, always arises from the influence of cold, and implicates in its simplest forms the villous coat of the intestines, the liver, and the skin. In this disease, as in typhus, death sometimes takes place before the excitement has had time to emerge; but when the fever is fully developed the disease is attended under all its severer forms, with an acute or sub-acute inflammation of the villous coat of the intestines, and generally with an inflammatory or engorged state of the liver. If the inflammation of the villous coat of the intestines be of the sub-acute kind, and the affection of the liver similar, daily purging by calomel and castor oil, with occasional anodynes and the warm bath, may certainly accomplish the cure in many cases, provided these remedies be opportunely adopted. Yet even in such instances, it is invariably much better to bleed moderately in the beginning, and, the bowels having been freely evacuated, to produce ptyalism as rapidly as possible by the administration of calomel, with small portions of opium. If my observation be correct, early and sometimes repeated venesection at once diminishes the force of the abdominal affections, renders the system much more susceptible to the action of purgatives and mercury, and not only shortens the duration of the disease, but greatly lessens the chance of chronic affections supervening the primary disorders of the abdomen. This even obtains in dysentery, combined with the lowest degrees of inflammation, and those forms combined with an acute inflammation, absolutely require decided blood-letting from the first attack; as they are generally so rapid in their progress, that there is no remedy, with which we are acquainted, which can operate so speedily as venesection in checking the inflammatory action.

The same active measures have not been in his hands as efficacious in the treatment of Laryngitis; and although they

are not to be neglected, he is inclined to place the chief reliance on the free and, if necessary, repeated administration of antimonial emetics, from which he has derived a speedy and decided abatement of the disease.

Erysipelas, he divides, into the phlegmonoid and erythematic. The phlegmonoid attacks those who had been previously robust, or at least tolerably strong. The part affected is of a bright red colour, and much swollen, and the attendant fever is of the full inflammatory type, the heat being high and the pulse expanded and resisting; excepting where an internal inflammation is combined, and then the pulse is liable to be depressed, to be smaller, but still tenser than natural. In its simple form, one decisive bleeding from the arm, several leeches applied to the part affected, an antimonial emetic, followed by active purgatives, and a blister between the shoulders or over the epigastric region will in general be sufficient; but when it is combined with internal inflammation, especially of the brain, liver or intestines, more free depletion by venesection and purgatives will be required. The erythematic occurs in feeble and enervated habits. Here the efflorescence is of a dull red colour similar to that of the mulberry, is attended with little swelling, and an early tendency to vessication. The fever is of the irritative kind, with the pulse small, quick and soft, and the heat superficially pungent. This form is not nearly so liable as the former to be attended with internal inflammations, and will in general yield to mild treatment; for example, to moderate doses of castor oil to keep the bowels gently open, diaphoretics, tepid ablutions and light diet. He has not found topical applications of much service in this form of erysipelas.

His treatment of rheumatism consists in the more active employment of depletory means than are usually adopted. Early venesection and purgatives, succeeded by calomel, opium and antimony, local bleeding, blisters, and the warm bath, he has found generally successful, with cinchona to prevent

relapses. He inculcates the necessity of depending chiefly on general depletion for the cure of ophthalmia, and of expecting little from the use of collyria.

Tic Doloureux, he thinks, is a complaint of the brain itself, to which the disorder in the face merely stands in the relation of an effect. This opinion has arisen from the careful examination of several cases, in all of which the affection of the face was preceded and attended by clear manifestations of cerebral disease; such as pain, giddiness, confusion, or some other uneasiness in the head, more or less disorder in the functions of some of the external senses, with symptoms of congestion or of increased action in the vessels of the brain. In recent cases he has succeeded in removing the disease by repeated venesection and purgatives, sometimes aided by calomel and opium.

After assigning the credit of first employing calomel and opium as a general means of subduing inflammatory disease, to Dr. R. Hamilton of Lynn Regis, he enters into a detailed account of the conditions of the system in febrile and inflammatory diseases, in which this composition may be employed with signal advantage. He attributes to it the power of quelling vascular excitement and inflammatory action, allaying irritation, equalizing the distribution of the blood, restoring the natural balance of the circulation by communicating a power to the capiliary system of vessels, which enables them to resume their secretory office as before, and finally, of destroying morbid action and obviating, more than any other remedy those functional disorders and organic lesions so frequently induced by protracted inflammations.

Armstrong bears testimony to the curable character of mania in recent cases. He believes that the disease is never a purely mental affection; but in every instance depends on a diseased condition of the brain; sometimes excited, however, indirectly by mental emotions. It is frequently combined with hepatic disease, in some instances as the cause, in

others as the consequence of the hepatic affection. When the hepatic derangement becomes the cause of the disease, he thinks it acts by proving an irritant to the heart, by which the blood is propelled too powerfully towards the brain, causing venous congestion or arterial excitement; or the congestion of the liver, impedes the venous circulation of the brain and thus produces cerebral disorder. His treatment of the disease is in conformity with these views. In those cases where madness comes on suddenly, and is connected with great fullness in the vessels of the head, the immediate pressure must be promptly relieved, at the very onset, by free bleeding and purging; otherwise the patients will be either in danger of dying from venous congestion or arterial excitement of the brain, or they will be extremely liable to permanent alienation of mind. In the first two weeks of the disease, he has usually bled from the arm and temple until the fullness of the vessels of the brain was relieved, and the action of the heart restored; at the same time repeating the purgatives, giving calomel as an alterative, applying leeches to the head and continuing the ptyalism if excited; for generally his patients did not convalesce until they had been salivating for three or four weeks. The cold shower bath he has found beneficial in the stage of the excitement, and the warm shower, or slipper bath, in the congestive form of the disease.

The brain fever of drunkenness, which he considers as a sort of connecting link between mania and fever, he treats by moderate purging, cold affusion, and the exhibition of calomel and opium to allay the morbid irritation, and, obtain the specific effects of the mercury. In old and habitual drunkards there is great danger of early collapse, and in them evacuants must be used with great caution; for they on the contrary frequently require a more liberal use of opium, together with wine or some other stimulant.

We have thus detailed the leading doctrinal and practical

points of Dr. Armstrong's work, and stated our objections to such of the most important as appeared to us, to be erroneous. The work altogether may be considered a pleasing and erudite performance, replete with novel and interesting views of disease, and will richly reward the labours of long, diligent and repeated study.

On taking leave of Dr. Armstrong's performance we have a few words to say on the practice lately become very prevalent of publishing English works with notes by American physicians; and, also, on the ability with which this task has been performed in the present instance. Many of Dr. Potter's observations are certainly judicious and confirmatory of the author's doctrines and practice; others again appear to us to be deficient in interest, and much too long, and by diverting from the text, to take somewhat from that high degree of interest and mental abstraction, which its continuous perusal is so well calculated to maintain. On the whole, however, we would not be thought, to depreciate the labours of a physician so distinguished as Dr. Potter, whose merits have procured for him, the practical chair in the Maryland university; but we would recommend those who desire to have a full comprehension of Armstrong's doctrines, to give his work at least one perusal, neglecting all notes and commentaries whatever.—The practice of appending notes to English works, we have always viewed, rather as a mercantile transaction to monopolize the editions, than as a serious effort to render them more valuable: at any rate such has been the general result. From this remark we would except the labours of Rush: the lustre of his reputation served to revive the attention of American physicians to the study of the inimitable works of Sydenham, Pringle and Cleghorn, which were beginning to give place to more modern productions, and *in this way* he conferred a real benefit on the profession. But what advantage are the public to derive from the desultory remarks of an author, who is restricted by his bookseller, both as to time

and space, and writes on subjects which in general he has cultivated, only in common with the other departments of his profession? We think it would be more creditable to himself and serviceable to the public were he to employ his time on some chosen and favourite subject and not waste his talents in writing notes to explain what with a little attention may be readily understood.

History and method of cure of the various species of Palsy, being the First Part of the Second Volume of a Treatise on Nervous Diseases. By John Cooke, M. D. F. A. S. &c. &c. London. 8vo. pp. 215.

In our last number we took occasion to speak of the merits of the first volume of Dr. Cooke on nervous diseases, and gave our readers an anylysis of his work, in order that they might be enabled to form a judgment of its contents: we observed then, and since reading this second part we have no reason to alter the opinion; that it was a subject of regret, that talents, such as the author possesses, should be devoted to the mere collection and collating of others' doctrines, when half the time devoted to this subject would have sufficed, not to have *compiled* but to have *composed* a work, which would have been a lasting monument of the talents and erudition of the writer. The present volume is the first half of the second part, and treats particularly of palsy. The character of the book, the style in which it is written, and the manner in which the subject is handled, is so like the one we have examined, that had it been thrown anonymously into the world, there could not be the least difficulty in ascertaining its authorship; the remarks, therefore, to which these several points gave occasion when speaking of the former volume, will, with very little qualification, apply to this; the same reverence for ancient authority, the same copious-

ness of quotation from the Greek and Latin texts, and the same minuteness of detail, characterize the one as were calculated to impair our interest in the other.

While we contemplate with respect, nay, almost envy the author the possession of that patience in research, which "never tires," and that assiduity of application which even communicates a pleasure, whilst it creates fatigue; we cannot but think that our time would be full as well employed in studying the modern systems of medical philosophy, as in turning over the pages of ancient authors, whose very names would have been forgotten, were it not for the interest which many find in laying claim to their acquaintance. The time has been when a thorough knowledge of the old writers was as essential to the well bred physician, as a course of anatomical demonstration in our days; but it has long since passed away: the wisdom of the world was then bound up in volumes which were utterly unintelligible to the ordinary inquirer, who would not be at the pains of qualifying himself for the task of examining their contents; the information which ages had accumulated, was locked up in the silence of unspoken languages, and he who would not be at the trouble of forging his own key to discover the treasures which they contained, was obliged to remain ignorant of their existence, as he could not (before the discovery of printing) avail himself of that which belonged to his neighbour; then, too, the laborious student was amply compensated for the tedious search, if not by the acquisition of all the truth he sought, at least by the knowledge of all that was to be found: but the case is now changed, and the propriety of studying old medicine has been superceded by the necessity of keeping pace with modern improvements, compared with which even for the last century, all our knowledge derived from ancient sources is extremely limited. We trust we shall not be charged with indulging any undue or illiberal prejudices against the study of the Greek and Latin tongues; so far are we from undervaluing them, that we are finally persuaded it

is extremely difficult to understand our own language without them; we merely wish to enter a caveat against that affected veneration for the ancients, which seems to be a fashionable fault of modern European writers, and calls loudly for some correction.

The present volume, in a practical view, is much more valuable than the former; not because there is more ability displayed in the treatment of the subject, but, because there is a greater variety of points necessarily attendant on its history and curative indications, than on those of apoplexy, which are exclusively its subject: and because the subject discussed is one upon which medical men may very reasonably differ.

Dr. Cook has divided his work into seven chapters, the first of which embraces its definition, distinction, and general history; the second, the history of Hemiplegia; the third, the history of Paraplegia; the fourth, the history of partial Palsy; the fifth, the causes of Palsy; the sixth, the appearances on dissection, its diagnoris and prognosis; and the seventh, its treatment. All these, in the order in which they occur, are successively the subjects of very judicious remark; but as the first from, from their very nature, do not present any thing which is not familiar to the medical reader, we shall devote our attention mainly to the consideration of the three last, in which will be found displayed much accuracy of observation, correctness of judgment, and sound practical good sense.

In the enumeration of the causes of palsy, which, independent of the most frequent one, apoplexy, are very various; Dr. Cooke has included the extremes of heat and cold, insolation, the abuse of warm baths, violent affections of the mind, the suppression of ordinary or accustomed evacuations, whether sanguineous or serous; intoxication, injuries by violence, occasioning pressure upon the brain, mechanical impediments to the transmission of the nervous influence

from the brain to other parts, and various diseases, such as gout, rheumatism, scurvy, and scrofula. From a view of this list, it is obviously a matter of no small difficulty to explain their connection with the disease in question: the operation of some of the causes appears natural enough, and accords with the generally received opinions on the physiology of the brain and nerves, but there are others, such as scurvy and scrofula, for instance, which seem to have no conceivable connection with it, and therefore, ought to be considered as fortuitous coincidences, unless indeed, the solution of their agency can be found in some derangement of the chylopoietic viscera.

In the review of Dr. Cooke on apoplexy, we took occasion to advert to the close affinity which appears to obtain between the diseases of the head and those of the viscera, as well as their transmutable character; and we here repeat, that the frequency of these transmutations, affords evidence by no means equivocal, that some of them at least have a common origin. There is an obscurity attending the pathology of these diseases, which the keenest scrutiny of the anatomist or physiologist is unable to dispel without some such assistance, and we have much deceived ourselves, if a severe examination of this subject would not result in a very rational explanation of some phenomena which heretofore have eluded our observation. There is abundant evidence that organic derangement of the brain, in so far as it is cognizable by our senses, is incompetent to account for the various paralytic affections supposed to arise therefrom; and the experiments of M. Serres, which have been largely extracted in the work before us, are on this head conclusive, though for the purposes for which they are instituted, we think with our author that they are perfectly useless. We will here transcribe these experiments, and Dr. Cooke's reflections on them, as it will serve the double purpose of shewing the inadequacy of the usually assigned causes of palsy to account

for the disease, and afford a fair specimen of our author's reasoning.

"With a view to prove that pressure on the brain ought not to be considered capable of producing apoplexy and palsy, M. Serres instituted the following experiments.

As apoplexy in man chiefly occurs in the decline of life, he selected an old dog as the subject of his first experiment. He trepanned the middle part of the cranium of this animal, over the superior longitudinal sinus, and introduced a very fine bistoury, so as completely to perforate the sinus, and stopped the external opening in order to confine the effused blood to the interior. The dog was then let loose; he ran about the room trying to make his escape. Three hours afterwards he appeared so little altered from his usual state, that it was doubted whether an effusion had actually taken place or not. On opening the cranium, however, a very large clot of blood was found in the great interlobular scissure, and another, somewhat less, upon the left hemisphere.—Another experiment of the same kind was made upon a young dog, with the same result.—These experiments were repeated many times upon rabits and birds, and always with similar effects: no somnolency was occasioned, nor any of the symptoms which accompany apoplexy.

M. Serres then proceeded to try the effects of effusions of blood forced into the ventricles of the brain. He trepanned a dog as before, over the middle part of the superior longitudinal sinus, and introduced a very small bistoury into the great interlobular scissure; he pierced the corpus callosum, and so directed the point of the instrument to the left, as to enter the ventricle on that side. He then withdrew it, and closed the external opening. The animal, for about a minute, was affected with vertigo; he was dull through the whole day, and his pulse was a little agitated, and there was a considerable alteration in his appearance: his sleep in the night was disturbed; in the morning he walked about the laboratory, and appeared less indisposed than on the preceding evening; but there was no somnolency. On opening the cranium, the effused blood was found to have filled the great interlobular scissure, and to have penetrated into the left ventricle, which contained an ounce and a half of it. A small cavity was found in the anterior part of the corpus callosum. A rabbit two months old was subjected to a similar experiment, and with similar consequences.

After this, M. Serres proceeded to try the effects of artificial cavities made in the substance of the brain. For the subject of this experiment he chose an old dog, and made an opening over the lateral and somewhat posterior part of the longitudinal sinus; the

bistoury pierced the left hemisphere, and brought away about two drachms of its substance ; but no somnolency, or impeded respiration supervened. A cavity, containing a clot of blood of the size of a nut, was found situated at the middle part of this lobe. In another animal, he made a cavity in each lobe, without any apoplectic symptoms. He pierced through the two lobes in a pigeon with a very large pin, with the same result; a transverse cavity made from one side of the cranium to the other, produced no somnolency. In another experiment he made an opening into the middle part of one hemisphere of the brain, and took away a certain quantity of cerebral substance ; he then introduced a cork into the aperture, with a view to increase compression. A complete hemiplegia was the consequence ; but there was no apoplexy or somnolency. These experiments were repeated in various ways, on birds, rabbits, and other animals, and always with the same effects.

Hence it appears, says M. Serres, that effusions of blood do not produce apoplexy, whether lodged between the cranium and dura mater, or between that membrane and the brain ; whether they occupy the great interlobular scissure, and thus lie upon the corpus callosum ; whether cavities be made in the fore, the hind, or middle part of the hemispheres, or quite through them both ; or, finally, whether, piercing through the corpus callosum, we penetrate into the ventricles of the brain, and fill these cavities. On whatever animals we try these experiments, whether on birds, on rabbits, or on dogs, the result is the same : and, by analogy, M. Serres concludes, that apoplexy in man ought not to be attributed to such effusions.

After having thus, by experiment, endeavoured to prove that apoplexy and palsy are not produced by pressure, M. Serres attempts, by reasoning, to show the absurdity of the doctrine which attributes the diseases to that cause. Do the facts of pathological anatomy, relative to the brain of apoplectic persons, he asks, contradict my experiments ? Has a constant agreement betwixt the accession of apoplexy and the formation of effusions, been observed ? Does the doctrine of compression from effusion account for the formation of apoplexies, their progress, and termination in death or in recovery ? On dissection, serous, sero-sanguineous, and bloody effusions," M. Serres. says, " have been found within the cranium, without any symptoms of apoplexy preceding death. How is this to be accounted for ? Can a cause exist without an effect ? Apoplexies, we are informed, are sometimes in their course subject to *paroxysmal revolutions.* How is this to be understood on the supposition of compression from effusion ?—It is well known that apoplexies accompanied with effusion may be cured. In these cases, what becomes of the effused fluid ? Is it

absorbed, or does it remain after the cure?"—M. Serres mentions instances in which apoplexy has been cured, and the patient has continued well, although the effusion which accompanied it remained, and appeared after death. The effect of these fluids, then, in man, he says, is the same as that which we have seen in brute animals; neither the origin, the severity, nor the duration of apoplexy are to be attributed to them.

The sudden accession of this disease, its periodical returns, which are sometimes observed, and experiments upon living animals, all lead us, M. Serres says, to the belief that effusion is the effect, not the cause, of apoplexy: a conclusion, he observes, very important for the pathology of the brain, and to which he requests the utmost attention of observers."

M. Serres then proceeds to lay a foundation for a new division of diseases of the brain, which we regret that our limits will not permit us to insert: upon all which, Dr. Cooke remarks:

"The observations of M. Serres, and the facts which he has adduced are highly worthy of our attention, and great credit ought to be given to him for his diligence in improving the peculiar opportunities for information which he enjoyed; but I think the conclusions which he has drawn from his reasoning are too general, and by no means strictly logical. He states, that he has, in many instances, thrown blood upon, and into the meninges, the cavities, and the substance of the brain, without producing apoplexy, or even somnolency; that upon the examination of a very great number of persons after death from apoplexy, he has found the meninges bearing evident marks of irritation (inflammation,) accompanied with effusions of various kinds, and in various situations within the cranium; that sometimes he has observed the brain itself to have been injured in its substance, but without effusion; that in the former cases he has ascertained the preceding apoplexy to have been simple, and in the latter, combined with palsy; and that he has known many cases of apoplexy without effusion, and of effusion without apoplexy: and hence he concludes that he has overturned the doctrine of apoplexy and palsy from pressure, and has established a better system respecting the distinctions and nature of the diseases, than any hitherto presented to the world: but the accuracy of one of these conclusions at least, may, I think, be reasonably doubted.

If M. Serres chooses to denominate those apoplexies *meningeal* in which the meninges appear to have been diseased, accompanied with effusion, the brain being in a sound state, and those *cerebral* in which there is no effusion, but the brain itself is disordered; ff

M. Serres chooses to make this division of the disease, I see no objection: perhaps it is better than that of sanguineous and serous. But, though physiologists may approve of his distinctions, I much doubt whether they will be disposed to admit that he has overturned the doctrine of apoplexy and palsy from pressure.

He has shown that blood has been effused in various situations within the cranium, without apoplexy; but he cannot hence fairly conclude that effusion never produces the disease. Since he admits that there is effusion in the meningeal apoplexy, how can he prove, even allowing it to be the consequence of what he calls irritation of the meninges, that the irritation, and not the effusion, is the immediate exciting cause of the disease. If compression by fluids were the cause of apoplexy, M. Serres says there could be no apoplexy without effusion; but the want of logical precision here is evident, unless we grant, what I believe few physiologists would admit, that compression from fluids is the *only* cause of the disease. That some degree of pressure may be made on the brain without producing either coma or apoplexy, may be conceded as proved by M. Serres's experiments; but it by no means follows that a different or greater pressure would not produce these diseases; indeed, both observation and experiment decidedly show, that compression does sometimes, according to its degree, give occasion, first to somnolency, and then to complete apoplexy. It is a fact perfectly well known, that after the operation of the trepan, pressure on the part deprived of cranium produces these effects: and innumerabble instances might be adduced in which compression by depressed bone after accidents, has given occasion to coma and apoplexy."

It appears from the above quotation, that some organ other than the brain, either directly or intermediately, must have an influence in producing palsy, and that this organ is the liver, appears highly probable, from the fact, that the disease frequently has place, when no derangement of the functions of the brain could be detected, more especially in persons who have accustomed themselves to the large and frequently repeated use of spirituous liquors. It is upon this supposition, too, that we are enabled to account for the facility with which gout and arthretic rheumatism may degenerate into Palsy, and we speak from our own observation, when we affirm, that we have seen gout and epilepsy vicariously affecting the same patient. Whether the various mo-

difications of disease, which usually are accompanied by morbid affections of the liver, such as scrofula and scurvy, are sufficient of themselves to produce palsy, we will not undertake to say, though we have no hesitation in believing that they are much less liable to induce it, than when combined with derangements of that organ. If our limits did not prevent, we might dwell at considerable length on this subject, but enough has already been said, to render the agency of the liver a probable source of paralytic affection; it is unnecessary to remark, that if the above suggestions be well founded, they ought materially to modify its treatment. Dr. Cooke has enriched this chapter, by ingrafting in his work, the opinions and cases of Doctors Abercrombie, Portal, Baillie, Powell, and Percival, and Messrs. Pott, Bell, and Cooper, which, together with those of M. Serres, extracted from the Annuare Med. Chirurgicale, form such a body of information on this subject as we may in vain search for in any other similar publication, in the same number of pages. The sixth chapter contains little which might not, with much propriety, have been said on the same points, when treating of apoplexy, and the author sensible of having anticipated, when treating that disease, has dismissed it in a few paragraphs. The following are his remarks on the prognosis:

"As far as my own experience enables me to judge, the prognosis in the general palsies, must be almost always unfavourable. I have seen many cases of recovery from palsy in a very considerable degree; but I do not recollect more than one, or two cases, of a complete restoration, both of sensation and motion, in the whole of the side of a person who had been affected with a perfect hemiplegia. When this species of palsy depends upon an injury done to one side of the brain, which is almost always the case, I am inclined to think that the mischief is seldom, if ever, entirely obliterated, and the disease wholly removed. On the dissection of persons after palsy, either evident disease is found in the brain, or marks of the existence of former disease, which had given occasion to the complaint; and although Messrs. Rochoux and Riobe have adduced good reasons for believing that fluids

effused have been absorbed, and that cavities in the brain have been sometimes closed, yet the mischief may not have been completely removed, nor the brain perfectly restored to its healthy state; and whilst any morbid cause capable of producing palsy continues in any degree to exist, it is natural to imagine that palsy in some degree would remain. Reasoning from appearances after death from palsy, would lead us to conclude that the disease almost always, in a greater or less degree, does remain, Instances may, no doubt, be adduced of perfect recovery from palsy; but I am persuaded that such are of very rare occurrence. If persons affected with hemiplegia do not become apoplectic in a short time, it often happens, that after a certain degree of amelioration, the disease becomes stationary, or very gradually proceeds, even for several years, before it terminates fatally.

In the treatment of palsy, our author insists strongly on the propriety of bloodletting and in addition to his own experience in this disease, he has adduced the authority of many eminent physicians both antient and modern in support of the practice, but all those cases in which the practice is inculcated, are manifestly such as are the consequences of apoplexy or arise from the same reputed cause, viz. pressure on the brain, and indeed his recommendation of the remedy is qualified by that condition; the correctness of the treatment is obvious enough, when the cases are recent and marked by the symptoms which characterize what by some authors has been termed the acute form of that disease. The same indications which call for free and full bloodletting appear also to render the exhibition of active cathartic medicines indispensible, accordingly we find that they are much insisted on by Boerhaave, Van Switeen and others, and though Dr. Cooke is not extravagant in their commendation he allows them to be not only safe but necessary in all cases of hemiplegia. The use of emetics in this disease though not by any means a common practice in England is very general with the French physicians, and from the universality of their prescription by gentlemen who have the most frequent opportunities of treating the complaint in the extensive hospitals of Paris. they must be considered as remedies of no equi-

vocal efficacy. On their modus operandi, Dr. Cooke has not thought proper to offer any opinion, he neither approves nor condemns their exhibition, leaving the reader to infer that they are not obviously remedial, and therefore that they may be dispensed with without incurring censure. On this subject we are sorry that we are obliged to differ from our author; we are disposed to consider them essentially serviceable, on the simple consideration that their operation equalizes the circulation and invariably produces, a full moderate and soft pulse, whenever they are properly exhibited, that is after having premised due evacuation: that this effect is fully sufficient to compensate for the temporary tumult of the circulation consequent upon the immediate act of vomiting cannot be doubted, by any who have witnessed their good effects in hæmoptysis, where if at all, we should have a right to fear this result: indeed of all the various opinions of the operation of this remedy, none appears to us more rational, than that which proceeds upon the assumption that the system of the circulation, among other great and important ends which it is designed to answer, serves a purpose analogous to that of a pendulum, fly wheel or regulator, to a most complicated machine, not only marking the regularity, but the momentum of disease, and therefore it is that all medicines whatever be their immediate operation, if not positively noxious must be serviceable whenever their exhibition is attended with results similar to those which follow the use of emetics. The whole list of diaphoretics, diuretics, sialagogues, and sernutatories, as medicines upon which dependence may be placed Dr. Cooke is not enabled to recommend. When the disease is not marked by any inordinate determination of blood to the head, and has been slow and insidious in its attack, the remedies are of a different character, and consist in frictions, blisters, sinapisms, fomentations, warm bathing, and the internal exhibition of acrid vegetables, volatile salts. resins, &c. together with the use of

electricity and galvanism which may be considered as remedies of general application. Dr. Cooke has inserted a variety of cases of palsy cured by electricity and galvanism, and has given the directions for its exhibition: the authority on which they rest, and the success which attended this treatment, fully warrant us in believing that they are among the most valuable means heretofore used for the cure of this distressing malady. When almost all other means have failed the burning of moxa has been found serviceable. A case of this kind, treated under the direction of M. Dupuytren is given, in which it was attended with the most marked success. The Rhus toxicodendron, nux vomina, leopard's bane, horse radish, cantharides and opium, are all set down as remedies in this disease, and it must be confessed, that the two first, have a distinguished claim to be so considered: the nux vomia particularly from the number of cases adduced by Dr. Cooke from Drs. Alderson, Fonquier,* Dickson and Rose, and the success which attended them may be considered as one of etablished reputation, and though a violent poison is as much under the controul of the skilled physician as any other article of the materia medica.

Those cases of paralysis which depend upon diseased spine are more particularly the subjects of surgical treatment, and do not occupy much space in work, the means most serviceable are, setons and perpetual issues made either by incission or caustics, the latter of which are to be preferred as upon the whole least painful, and most manageable. The treatment of those cases of paraplegia which are referable to a morbid state of the brain, are confessedly rare, and when they do occur, require the same general remedies, as hemiplegia, together with the half bath, and those

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* For a particular account of some of Dr. Fonquier's cases. Vide Med. Repor. Vol. IV. page 142, new series.

local stimulants which are called for in cases of more circumscribed palsy. The palsies of the organs of sense occupy the next place; but their causes and combinations with other diseased states of the system, render it extremely difficult to lay down any specific directions for their cure. The cases recorded by our author from Ware, Blagden, Richter, and others, are highly interesting and instructive.

It is hardly necessary to detain the reader with the history and treatment of palsies from poisoning, the one is involved in impenetrable obscurity, and the other has varied with the speculations of every author who has made them the subjects of remark; the few observations on this subject which are found in Dr. Cooke's book, though they are not calculated to throw any light on the manner in which these agents operate to induce the disease, are nevertheless well worth the attention of every medical practitioner.

In conclusion we have to observe that, one of the chief excellencies of this book consists in the variety of opinions which the author has brought together, and the fidelity with which they are detailed; it would seem to have been his object, to collect in one view all the practical information, which the published works of medical writers, and the written communications of his professional friends, could afford, and although the work is far from being a finished performance, its faults are not so much chargeable to want of industry or ability in its author, as to the abstruse nature of the subject itself. The physiology of the brain and nerves is still involved in much obscurity, and under such circumstances it is impossible that the pathology of their diseases, should be well understood, and although the science is much indebted to the researches of such men as Monro, Hunter, Bichat, Brodie, Le Gallois, and Philip, there is, if we may judge of the results of their experiments, infinitely more to learn than we have yet acquired; and until our knowledge of the laws which govern the nervous system be more complete, and the

nature of its connection with the other systems of the human body be more fully investigated, we must be contented to follow the best guides, which science can furnish, always qualifying our conduct, by the consideration that the results of experience itself, are not always to be received as indubitable evidences of facts.

Mémoire au-Roi en son conseil des ministres, et aux chambres, ou protestation contre le travail de la commission sanitaire centrale du Royaume, instituée à l'effet d'examiner les dispositions législatives et administratives qu'il serait utile d'adopter pour organiser le service sanitaire des Côtes et Frontières de la France. Par M. Jean Devèze, M. D. &c. &c. &c. Paris, 1821. pp. 33. 4to.

The editors have lately received from its celebrated author, a copy of a pamphlet with the above title, and take great pleasure in laying it before their readers. The following remarks are not so much intended to serve the purposes of a review of the author's doctrines, with which the profession are already very familiar, and upon which they have already passed a very favourable judgment, as to represent the character of the man, who, against such immense odds, still perseveres in combating error and prejudice, though at the risk of all those immunities and distinctions which popularity is calculated to bestow. The work is an appeal, in the author's best manner, to the common sense and common honesty of every person with whom he is officially associated, while it addresses itself especially to the interest, both personal and political, of every individual who is engaged in commercial pursuits, or who can be directly or indirectly affected by quarantine regulations.

Before speaking of the book, it is necessary that the reader

should be made acquainted with the following facts, which, so far as we have been able to inform ourselves, are substantially correct. Dr. Devèze, immediately after having published his last work on yellow fever, of which we gave some account in our last volume, addressed himself to the minister of the interior, begging him to institute a course of experiments, at the public expense, in the United States, West-Indies, and South America, in order to settle definitively that question, of all others, most interesting to a mercantile community, viz. the contagious or non-contagious nature of yellow fever; to the end that a perfect system of quarantine might be devised, by which full security against all imported diseases might be obtained, while at the same time the commercial interests of the nation would be disembarrassed of many vexatious, oppressive and expensive restrictions. A commission, consisting of seventeen persons, was accordingly appointed "à l'effet d'examiner les dispositions législatives et administratives qu'il serait utile d'adopter pour organiser le service sanitaire des Côtes et Frontières de la France," but unfortunately for the cause of truth and the interests of the empire, it was strangely constituted. It consisted of *three counsellors of state, one master of requests, one counsellor at law, two bankers, two administrators of hospitals, one general officer, one chef du bureau of the minister, and six physicians*, of whom five openly professed their faith in the contagious attribute of the disease, (which very question was the subject of their inquiry,) although three of them had never seen it; and of the other two, Bailly and Pariset; Bailly alone had had the opportunity of studying it: Pariset had scarcely more experience than the majority of his associates. Devèze stood alone in this celebrated college, the fearless advocate of its non-contagious character, ready to prove, if opportunity was offered, even to the conviction of the most bigoted partisan of the opposite doctrine, that the opinions which he held were based upon the rock of expe

rience, and accorded with facts as ascertained, wherever the disease had made its appearance.

From a commission thus organised, just what has happened might have been expected, if *even* they had applied themselves severely to the business of their appointment; for it is hardly to be supposed, that men who had resisted the evidence of truth, when the facts were furnished by themselves, would be likely to be convinced by the facts and reasonings furnished by others. But what must have been the public disappointment, when, instead of instituting any inquiry into the subject, they commence their operations without asking for, or accepting any new light, while they reject all the evidence heretofore adduced, and treat the question as "une chose jugée," and to their satisfaction at least definitively settled? Their sage consultations resulted in a recommendation, of a more rigid system than had yet been exercised, and the whole Atlantic coast of the French empire is subjected to as much, and as vexatious restriction as had been imposed in its Mediterranean ports, in order to guard against the introduction of the Levant plague, although contagionists themselves acknowledge a marked distinction between it and yellow fever, both in character and malignity. Thus the just expectations of those who devised and recommended the inquiry, as well as those who appointed the commission, were alike frustrated; and the measures which were intended, by modifying quarantine law, to insure a just and reasonable exercise of its provisions, were made subservient to a more rigorous execution of them, in despite of all the evidence which directed to another and different course of conduct. It is against this, which Dr. Devèze considers a palpable dereliction of duty on the part of the commissioners, as well as against their obstinate perseverence in error, that he protests; and it must be acknowledged that he has done it in such a plain, argumentative, and comprehensive manner, as cannot fail to

convince every reasonable man, and confound every perverse or prejudiced one, who will be at the trouble to read his exposition.

He begins by stating the various obligations which have imposed upon him the necessity of absolving himself from any agency in the disastrous project of the commission, of which he was a member; and although he does not indulge in any severity of remark towards those with whom he was associated, he by no means leaves doubtful the causes which operated this result.

M. Bailly was a distinguished member, had formerly been specially deputed by government to collect information on yellow fever in the peninsula, at Cadiz, and Gibraltar, and had written a work on the subject which had acquired great reputation; his character for information, his influence, together with the assistance of popular opinion, which is ever, when uninformed, controlled by its fears; were most probably mainly instrumented: for he it was who oppugned the proposition of Dr. Devèze, urging as a reason, that it would be inhuman to make the experiments, and that if made they would not lead to any settlement of the question: as if, forsooth, the *necessary experience* of a given number of intelligent physicians appointed by the government to attend the practice of the colonial hospitals in the West Indies; and the facts which might be obtained from authentic sources, certified by its authorized agents in this country, would not as completely serve the great purposes contemplated, as any set of experiments which could be adopted.

The author charges the commission with refusing to be at the trouble of ballancing the evidence within their reach, obstinately shutting their eyes against the light, and cherishing a delusion; of having no opinions formed of the disease but such as were derived from the newspapers of the day, the exaggerated recitals of travellers, or from observations collected in midst of the confusion of a camp, and those too

in a country where the publication of the truth did not always secure its author from the penalties of the inquisition.* He then proceeds to show that much of the fatality of the disease, when it has appeared on the continent, was chargeable to the ill-judged precautions of a close quarantine, which necessarily obliged the well to remain immured in the same atmosphere with the sick.

"C'est ainsi qu'environnée de ténèbres, la commission n'a pu éclairer le Gouvernement sur les grands intérêts qui lui sont confiés ; c'est ainsi qu'entre ses mains la législation sanitaire en France menace de rétrograder vers les tems qui l'ont vue naître, et en raison inverse des progrès des lumières du siècle ; c'est ainsi que le systême quarantainère, enfanté par l'erreur, avec les cordons et les autres mesures prétendues sanitaires, vont être maintenus avec plus de rigueur que jamais. Au lieu de travailler à assainir les localités qui, sous certaines températures et conditions atmosphériques, peuvent développer les miasmes procréateurs de la fièvre jaune, on condamnera au feu, tout innocens qu'ils soient, les effets qui auront servi aux malades, comme on y condamnait autrefois les gens convaincus de sortiléges. Au lieu d'envoyer les malheureux atteints de l'épidémie chercher leur salut dans des lieux sains et bien aérés, une loi barbare les retiendra plongés

* In 1801, M. Armesto, an intelligent and distinguished officer of the royal Spanish Maine, published at Cadiz a small work on yellow fever, which ravaged that city. He explained the true causes of that epidemic displayed in the nature of those localities, which are found to be the same in all places where this terrible pestilence rages with most violence. His work was submitted to censure, but was not examined : and as little importance was attached to the observations of one who was not bred a physician, it was permitted to be printed. The book then appeared, protected by all the form and usages of law, but strange to tell, so soon as it was known that Armesto had had the courage to avow the non-importation and non-contagion of yellow fever, the college of physicians was thrown in an uproar, and denounced the audacious author to the inquisition, he was arrested, fettered, thrown into a dungeon, and obliged to abjure his error *en suppliant*, that is to say, in a robe of sackloth, with a rope around his neck, barefooted, holding a torch in his hand. All the copies of his book were seized and burnt, and the poor man was obliged to abandon his country. *Voy, Alphonso de Maria*, Mém. sur les Epidémies de l'Andalousie, de 1800 a 1819.

A review of M. Armesto's work will be found in the 11th volume of this journal, page 131.

dans l'atmosphère impure qui a créé leur maladie, et où ils ne trouveront désormais que le désespoir et la mort. Au lieu de faire fuir aux personnes que l'épidémie n'a pas encore atteintes ces foyers d'infection où leur perte se prépare, on les y retiendra impitoyablement attachées ; au risque d'augmenter l'encombrement qui, dans certains cas, peut accroître l'activité des miasmes délétères dont elles seront environnées ; au risque de les laisser, sans consolation et sans secours, éloignées de leurs parens, de leurs amis, en proie aux affections les plus tristes et en même tems les plus propres à développer la maladie. Et encore, pour l'exécution de cette loi appelée sanitaire, mais en tout semblable à celle qui ordonnerait de tirer sur des malheureux qui chercheraient à s'échapper du feu, faudra-t-il avoir recours à des mesures qui traînent après elles la terreur, l'épouvante et la famine, portent un préjudice notable aux relations commerciales, sont onéreuses aux Gouvernemens, propres à faire naître le mal qu'on veut éviter, et toujours incapables d'en arrêter la marche."

And after observing that those who maintain contrary doctrines, are not in want of objections to his opinions, wherewith to support their quarantine law: he tasks himself to show that Messieurs Pariset and Bailly, when judged by their own writings, have not, in forming their judgments, followed the march of their own experience. It would be as curious as interesting to follow our author, through his analyses, and applications of some of the most striking facts furnished by these gentlemen; but the limits which we have assigned to these remarks, prevent us from extracting sufficient to satisfy the reader, we must therefore refer him to the book itself, which will amply repay the trouble of perusal; it is certainly extraordinary, and yet unquestionably true, that he has drawn many of his proofs of the non-contagiousness of yellow fever, from the observations of authors who, in spite of themselves, have maintained opposite doctrines.

The following passages afford a very fair specimen of the author's manner, and will give the reader a good idea of the materials of which the paper is made up.

" Mais telle est la difficulté que l'on rencontre à soutenir une doctrine erronnée, qu'elle vous entraîne sans cesse à des contradictions qui vous trahissent et décèlent la faiblesse de vos preuves et de vos moyens.

" *Exemples:* A s'en tenir au passage de M. Bailly que nous avons cité plus haut, on dirait que la propriété contagieuse de la fièvre jaune est toujours assise sur des preuves tellement irréfragables, qu'il serait ridicule de la méconnaître. Comment concilier cette assertion avec ce qu'il dit, page 12: " Cette maladie est fort souvent contagieuse, mais elle ne l'est pas toujours," et, page 423: " Nous disons avec les uns, la fièvre jaune est contagieuse; et avec d'autres, elle est quelquefois dépouillée de ce caractère." Cette concession serait déjà quelque chose, et nous en prendrions acte, si en médecine on pouvait admettre comme principe, qu'une maladie donnée ne jouit pas toujours des mêmes propriétés. Et cependant tous les contagionistes, dans l'embarras de leurs explications, disent et répètent que telle épidémie, qui n'est pas contagieuse dans tel ou tel pays, dans telle ou telle circonstance, le devient dans tel ou tel autre pays, dans telle ou telle autre circonstance. Ils font la fièvre jaune originaire, tantôt des Antilles, tantôt d'une autre contrée; et prétendent que là elle peut bien n'être pas contagieuse; mais que, transportée dans d'autres climats, elle le deviendra si elle rencontre des circonstances propres à développer en elle ce caractère. Déplorables argumens avec lesquels on prétend en imposer aux peuples et aux gouvernemens. Dites moi, je vous prie, comment elle pourra être importée dans d'autres climats, si elle n'est pas contagieuse dans celui où elle a pris naissance? transporterait-on le virus vaccinal ou le variolique, si la vaccine et la variole n'étaient pas contagieuses chez les sujets où on les puise?

" M. Pariset, après avoir démontré dans vingt passages de son ouvrage, que la fièvre jaune n'est ni importée ni contagieuse, finit pourtant par dire qu'elle est importée, qu'elle est contagieuse. Et cette conclusion ne paraît pas être chez lui le résultat de son intime conviction, mais la condition nécessaire à l'établissement de nouveaux lazarets et de nouvelles mesures sanitaires; seul but de son voyage en Espagne par ordre du Gouvernement. C'est du moins l'idée que je m'en suis formée par la lecture attentive de son ouvrage; et l'idée vraisemblablement que chacun s'en formera, ne fut-ce que d'après le passage suivant: " Voici, dit-il, une note que je trouve à la page 236 du Traité de la fièvre jaune par l'illustre Aréjula:"

" ' Les chiens, plus que les autres animaux, furent exposés à la maladie qui affligeait les hommes. Après eux, ce furent les chats, les poules et les serins; ils mouraient en rejetant le sang par la bouche. Les chiens même et les chats offrirent ce dernier symptôme, bien que le plus souvent ils eussent des vomissemens et des selles de matières noires. De trois chiens de chasse et de deux chats que j'avais chez moi, aucun ne fut épargné; et je remarquai que tous eurent des dejections noires. Les chiens se sauvèrent,

les chats pêrirent. Les chevaux, que je vis expirer, furent pris ou de convulsions générales ou d'un froid de marbre aux extrémités. On m'assure qu'à la même époque les pigeons et d'autres volatiles furent atteints du mal épidémique, et qu'il y eut une grande mortalité parmi les poissons."*

"'Quand un observateur aussi respectable que M. Aréjula, continue M. Pariset, atteste un fait, il faut l'en croire sur sa parole; et quand il admet un fait comme probable, on peut sans risque l'admettre comme tel à son exemple.† Or, à quelles singuliéres conclusions ne conduiraient pas les faits consignés dans la note que je viens de traduire, sur les sources de ces épidémies, auxquelles participent également les animaux et les hommes? Si les animaux étaient les premiers malades, si les hommes ne l'étaient qu'après eux, ne serait-il pas permis d'en inférer que le principe générateur de la maladie est purement local; qu'il réside, soit dans l'économie des animaux eux-mêmes, soit dans les qualités du sol qui les porte; et que, dans l'un et l'autre cas, ce principe se forme et se développe par l'action soutenue de la chaleur, laquelle détermine, ou dans l'organisation animale, ou dans les vapeurs qui s'échappent de la terre, des combinaisons inconnues jusqu'ici? Où SERAIT ALORS LA NECESSITE DE RECOURIR A DES MIASMES ETRANGERS? *sorte de ressource qui ne peut satisfaire que des esprits peu difficiles; car, je le repete, ces miasmes, étrangers eux-mêmes, ayant leur origine, s'en prendre à eux, c'est reculer le probleme et non le résoudre.*

Après de tels aveux, on est étonné de voir que M. Pariset, avec les grandes connaissances qu'il possède, se soit fait contagioniste, et prête les mains à un projet de loi ayant pour but de s'opposer à la transmission des germes étrangers, auxquels il ne croit pas, ou que du moins il regarde comme très-problématiques.

Si je me suis attaché à combattre de prédilection les opinions de MM. Pariset et Bailly, c'est qu'elles me paraissent avoir exercé la plus grande influence sur le projet de loi objet de ma censure. En effet, la commission dont il émane se compose de trois Conseillers d'état, d'un Maître des requêtes, d'un Jurisconsulte, de deux Banquiers, de deux Administrateurs de lazarets, d'un Officier supérieur, d'un Chef de bureau du ministère et de six Médecins, dont cinq professent ouvertement l'opinion de la contagion;

* "Dans la fievre jaune qui affligea Cadix en 1764, les oiseaux de bassecour furent également attaqués de l'epidémie. Dans le muséum du collége, on a conservé des estomacs de ces animaux, qui ont été troués par des gangrènes."

† M. Pariset est beaucoup trop instruit pour ne pas savoir que tous les historiens des grandes épidémies, depuis la peste d'Athènes jusqu'à celles de nos jours, n'ont jamais manqué de noter que ces grands phénomènes dévastateurs portaient leur maligne influence sur tout le régne animal, et même sur le végétal.

opinion qu'ils font nécessairement partager aux autres membres de la commission ; en sorte que je forme à moi seul la minorité et que ma voix n'a pas même été entendue. Et comme parmi ces cinq médecins, trois n'ont pas vu la maladie et n'ont rien écrit à ce sujet, que M. Pariset l'a à peine aperçue et que M. Bailly est le seul qui ait pu étudier la fièvre jaune, pour avoir été assez long-tems témoin des ravages qu'elle exerce sur les Européens qui abordent les climats brûlans de tropiques, son opinion a dû être la seule prépondérante, la seule qui pût m'être opposée, à moi qui ai observé soigneusement cette maladie dans les deux Amériques, à moi qui, dès l'année 1794, ai proclamé le premier,* d'après une expérience de vingt années sous diverses latitudes, qu' *elle n'etait jamais contagieuse, et qu'elle naissait toujours de causes locales.* Malheureusement pour M. Bailly, il se trouve en opposition de doctrine, relativement à la nature contagieuse de la fièvre jaune, et avec lui-même comme on l'a vu, et avec tous les médecins et chirurgiens francais qui ont excercé ou qui exercent avec quelque distinction dans les régions équatoriales ; tels sont MM. Valentin, Dalmas, Savarésy Peyre, Lefort, Lavallée, Cassan, Dariste aîné, Dariste jeune, Gaubert, Luzeau, Peyré, etc., etc. L'opinion de ces médecins snr le caractére non-contagieux de la fiévre jaune est consignée dans les ouvrages qu'ils ont publiés ; dans des mémoires particuliers dont toutes les sociétés et les journaux de médecine retentissent ; dans des rapports faits à l'Autorité, et qu'il est facile d'extraire des cartons du ministère de la marine, où ils sont déposés."

Having thus disposed of Messieurs Bailly and Pariset,† he adduces the testimony of many written authorities in this country to support the doctrine he advocates, and shows their perfect accordance with recent facts, as observed at Montpelier, Marseilles, and even at Paris, by Bronssonet, Robert, and Portal ; and occupies nearly thirty pages in the details of observations from a great variety of works written

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* Devèze : (Jean) Dissertation sur la Fièvre jaune qui régna à Philadelphie en 1793.

† By referring to M Pariset's book, the reader will learn that he does not believe the yellow fever of North America to be contagious, but that the yellow fever of Spain *is*, and moreover that it cannot extend its ravages, to a greater distance than thirty or forty leagues from the sea coast. With what consistency then, it may be asked, could he vote in the commission for placing both countries under the same rigid system of quarantine ?

on this interesting subject, many of which have not been heretofore published.

We shall close these few remarks by cordially recommending the work to the notice of every man, who wishes to arrive at the truth on this long contested subject, at small expense of time or reading, as it is, in fact, a compendious view of the question stated in such a form as admits of no evasion, while it challenges the severest scrutiny. If any thing can add to the interest of the pamphlet, it is that, although it does not contain a single offensive expression, the commission refused it a place on their minutes; if it be asked, why? the answer may be found in the severe censure which the language of facts with which it abounds passed upon the conduct of a large majority of its members.

Replication of the Medical Society, of the State of Louisiana, to a statement of the Yellow Fever, as it occurred in New-Orleans, in 1819, *by J. Baxter, M. D. &c. as published in the Medical Repository, Vol.* 6. *No.* 1.

The objections of the Medical Society, of Louisiana, to Dr. Baxter's statement, are comprised in the following seven articles abstracted from their report.

Art. 1st. The meteorological observations of Dr. B. are not in accordance with those of Mons. Lafon, Engineer of the State of Louisiana, whose tables are inserted in the statement published by the Medical Society. Dr. B. affirms, "that the first case of yellow fever occurred on the 29th of June, and the second on the 30th; that it became more frequent until the end of July, increasing in intensity of symptoms and mortality; that at this period the disease seemed to have suspended its ravages." (p. 2.) Instead of which the reporters declare that the fever had existed from the

month of May, and continued to prevail sporadically, to the commencement of August; that far from having suspended its ravages, it increased until the end of September.

Art. 2d. Dr. B. asserts, (p. 3.) "The black vomit was not so general as is usual; I saw but one case of it; the suppression of urine seemed to have superseded it." To prove that this observation is unfounded, it is said that the writer, shortly after his arrival, was taken sick, and therefore could not have had a sufficient opportunity to ascertain the character of symptoms which have not fallen under the notice of other practitioners of the city.

Art. 3d. The mortality is made by Dr. B. (p. 4.) in the proportion of 16 per day by the 13th of August, of 25 on 29th, and of 36 on the 5th of September, making thus an average for this month of about 25 per day. Whereas it being ascertained by public records that 594 died with the yellow fever during September, there could be but an average of 19 deaths per day. Nor is it true, that the fever proved equally fatal to the natives as to the strangers; for it is ascertained that of the former many recovered, and but few of them fell victims to the disease.

Art. 4th. The facts alleged by Dr. B. of secondary attacks of yellow fever are called in question. One is, that of a young Irish physician, lately from the Havanna, who had declared to him that he had suffered an attack of the fever at that place. Against which a counter statement, by a resident physician is opposed. The other case was a patient of the doctor's, and he represents him as having had the yellow fever in the East Indies: whereas the reporters affirm that the disease is unknown in that part of the world. Again, the veracity of Dr. B. is called in question, as it relates to the master of the vessel in which he came to New-Orleans, who it is said was not treated by him for yellow fever, but simply for an attack of bilious remittent. And finally it is averred that Dr. B. could not have witnessed six cases in

one place in the first week of July, when their existence if known must have caused great excitement in the city.

Art. 5th. It is not true, as stated by Dr. B., (p. 7.) that all the crew of the Frederic Adolphus, consisting of 22 men, perished with the fever. It appears, from the certificate of the Health Officer, that only three of them sickened and three died.

Art. 6th. The report invalidates the opinion of Dr. B. that the bilious remittent fever prevails endemically, in New-Orleans, during the whole year. On the contrary, this fever prevails during the summer months only, and at other times the city is as much favoured with public health as any other in the Union.

Art. 7th. The remedial employment of venesection in yellow fever, is opposed on the ground of its frequent failure and the many successful cases treated by other means.

The report terminates by expressing regret that the material incorrectness of facts, and misrepresentation of symptoms, in Dr. B.'s statement, rendered it necessary to make the present exposition ; and the affirmative complexion and positiveness of his production appears the more exceptionable, as from inquiry, and the testimony of two resident practitioners, (Randolph and Mercer,) who affirm that he was taken sick shortly after his arrival, and at the commencement of the epidemic, it is inferred that he could not have attended the sick, nor have enjoyed such opportunities for observation as the importance of the subject required.

Signed by

THOMAS, Sec'ry. Gen.

Abstracted from the original document, by Felix Pascalis, M. D. Editor.

COLLECTANEA CLINICA.

A case of Polyphagia, by C. Drake, M. D. Physician to the Bellevue Establishment.

Dennis Sheepard, aged 27 years, of a sanguineo-phlegmatic temperament, was admitted into Bellevue Alms-house on the 10th of August last, greatly emaciated, and complaining of pain and uneasiness in the epigastric region, attended with occasional vomiting and loss of appetite. The gastric derangement was supposed to arise from ordinary causes, and the usual remedies were prescribed; but the patient finding his situation becoming daily more alarming, disclosed, five days after his admission, the cause of his sufferings. He confessed that he had long been in the habit of swallowing knives and other indigestible materials, and that his present illness arose from fourteen clasp knives which, for some trifling compensation, he had swallowed in the course of one day in the first week of June last, while at Norfolk. He experienced no inconvenience from them until the next day, when he was affected with pain and soreness in the region of the stomach, which was soon followed by repeated vomiting, with loss of appetite, and debility. He managed, however, by slow and painful journies on foot, to reach Philadelphia, where he arrived on the 20th of the month, and was admitted into the Alms-house of that city. Whilst there, he was persuaded by one of the young gentlemen attending the house, to swallow another small pen-knife, for which he received a half a dollar. The physician of the establishment succeeded by the repeated use of cathartics and enemata, to cause two of the knives to be voided per anum; after which, he was discharged and came to this city, where he has been lurking about, exposed

to much privation, until his miserable condition obliged him to apply for assistance. On the 15th, a dose of castor oil was administered, which was soon after rejected, and recourse was then had to large purgative enemata. He took three in the course of the afternoon, which were rendered, highly charged with black matter. They were repeated the next day with the same result, but as they were attended with considerable pain, he refused to continue them. The day after, he took a cathartic of calomel and jalap, which produced several copious black watery stools, which continued of the same character and frequency for the remainder part of his illness. On the 19th,* I found him much exhausted, without febrile excitement, continually moaning, complaining of great distress in his abdominal region, with slight soreness on pressure, hiccough, pulse extremely small and weak, vomiting almost constant, especially on taking any thing into the stomach, or on change of position. By placing the trunk erect, and striking on the abdomen, I distinctly heard the clinck of the knives, and could also feel them through the parietes of the abdomen, as low down as the anterior superior process of the ilium; from which I judged that some of them had passed into the intestines. I directed small and repeated doses of tincture of opium in an anti-emetic mixture, with milk, arrow root, and mucilaginous decoctions for nourishment; and as he had been addicted to intemperance, moderate quantities of brandy and water. His low and rapidly sinking condition did not afterwards give me an opportunity of making further trial of evacuants with a view to discharge the offending substances. His vomiting and purging continued with unabated severity until the 25th of August, when he died, apparently from exhaustion and inanition.

The autopsic examination of the body was made six hours after death. The pharynx was found to be capacious, but

* Which was the first time I saw the patient.

otherwise natural. The œsophagus, as far as it could be examined from a dissection of the neck, appeared natural in every respect. On laying aside the integuments of the abdomen, the stomach was found to extend nearly as low as the anterior superior process of the ilium: three fourths of it, at least, was situated below the lower margin of the ribs. The external surface of this organ, and also that of the intestines, appeared no otherwise altered, than that the larger vessels ramifying in their coats were numerous, enlarged and turgid with blood. The colon, in its whole extent, was inflated and very tense. The omenta shrunk and very red. The knives were found occupying the left extremity of the stomach, all excepting one, which was in the œsophagus, just above the cardiac orifice. The stomach also contained about a pint and a half of black liquid, which emitted an odour very like to that of the washings of a foul musket. The whole tract of the intestines contained a similar fluid, perfectly devoid of any feculent or putrid character. About two inches of the inferior part of the œsophagus was thickened, and possessed more muscularity than natural. The stomach exhibited no trace of recent inflammation; it appeared merely to have received an increase of substance, each of its coats being thicker and more distinct than in its natural state. The left extremity, comprising about two thirds of the viscus, was much less altered than the remaining third: it was only about double its ordinary thickness, whilst the pyloric third was from a sixth to the eighth of an inch thick, with the muscular fibres remarkably large and distinct; the plicæ of the villous coat as large as the barrel of a writing quill, and encrusted with a black sooty matter, which was not detached by washing. The pylorus was so thickened and contracted, that it with difficulty admitted the fore-finger. The same kind of alteration pervaded the greater part of the duodenum, but in a much less degree than the stomach, and less and less as it receded from that organ. The remainder part of the in-

testinal canal, presented no preternatural appearance, with the exception of the cæcum and several inches of the colon, whose villous coat was highly inflamed, but showed no mark of effusion, ulceration, or sphacelation. The heart was very small, with the right side empty and flaccid, and the left much contracted, so that it could have contained but a very small quantity of blood. The stomach weighed thirteen and a half ounces. The twelve knives, one pound. The largest, which was four inches long and one and a quarter broad, two and a half ounces. Some of the knives were ordinary sized penknives with horn or bone handles; others were much larger, chiefly with iron handles. The bone of the handles was much destroyed, doubtless by the digestive process, whilst the horn remained entire and only warped. The bone of one of the knives was wholly detached and firmly fixed in the handle of another.

The following particulars of this man's former practices, I obtained chiefly from himself, a few days before his death. He acquired this singular habit at the age of fifteen, when he used to purloin marbles from his playmates, and swallow them, as the best means of avoiding detection. In this way, he would sometimes swallow as many as twenty in the course of a day, which he voided at stools, generally on the second or third day, without experiencing any inconvenience from them. Soon after, he swallowed, from mere whim, a small penknife, which also passed from him after two days, without giving him any inconvenience; and from this time for about two years, he was in the habit of swallowing, for small rewards and other petty inducements, various sized pocket knives, generally from two to six a week, which he voided in due time without experiencing much uneasiness from them. But on the whole, he thought this constant practice tended to impair his health and strength, and he refrained from it for nearly three years, when he was tempted to resume his old tricks, in order to supply himself with the means of indulging

his propensity to intemperance. From this time to his last illness, he continued with tolerable constancy, the habit of swallowing various indigestible substances. Whilst serving as a marine on Lake Erie during the late war, he swallowed, for ten dollars, an ordinary sized gold watch, with a gold chain, seal, and key, appended to it. This article was swallowed with pain and difficulty, which he thought arose not so much from its size, as from the irregularities of the chain and seal. It also gave him considerable pain and uneasiness in his bowels during its passage; and finally passed per anum on the ninth day, much blackened, but entire in every respect. Shortly after this affair, he swallowed, in rapid succession, thirty-four leaden musket bullets, all of which he voided in the course of two days. In August, 1819, he deserted from the military service, and while at Poughkeepsie, in a drunken frolic, he swallowed in one day and evening, nineteen pocket knives and forty-one cents. The next day, he was seized with violent pain in his stomach and bowels, with other distressing symptoms. A part of these articles were voided on the second day; but the others were not discharged until the expiration of a month. During all this time he was affected with various alarming symptoms, which finally subsided on the evacuation of the remainder of the knives and cents, by the repetition of active cathartics and enemata. He was treated during this illness, by Dr. F. Swift, U. S. army surgeon, who gave him, at his own request, two or three emetics, which operated fully, but did not alleviate his distress, or bring from him any of the offending substances. The knives he passed on this occasion, were much eroded, especially the bone of the handles, several of them in pieces, and a broad blade of one wholly detached from the handle. Dr. Swift presented five of these knives to Dr. Mitchill, who has them still in his possession. From this time Sheepard frequently required medical aid, in consequence of having swallowed various foreign materials that fell in his way, particularly but-

tons, which he would take down by the handful; so that his conduct became extremely troublesome, and subversive of that rigid discipline, which it is necessary to maintain in a garrison, and he was accordingly dismissed the service. After this, he led a vagabond life, continuing his unnatural pranks until his last illness.

It is remarkable in this case, that no part of the digestive organs exhibited any trace of recent or former inflammation, with the exception of the mucous membrane of the cæcum and colon, and even the inflammation of those parts may be fairly presumed to have been altogether adventitious, and to have been caused by the large enemata which were exhibited a few days before his death. The stomach and duodenum were surprisingly thickened, but discovered no abrasion of surface or scirrhus of texture; it appeared to be merely a preternatural developement of their coats, by which they were in some measure adapted to the extraordinary function they were continually called on to perform; and this developement was so perfect, that these parts might have served to demonstrate, with great clearness, the different coats of these organs. This increase of structure, I conceive to be analogous to the increased size and power acquired by certain muscles from long and excessive use in particular employment; and when we connect with this circumstance, the broken condition of the knives discharged on a former occasion, and the firmness with which the bone of one of them was fixed in the handle of another, we must admit that the stomach had acquired great increase of muscular power, which would seem to indicate, that this organ ordinarily exerts greater mechanical action on the ingesta, than is at present allowed by physiologists.

The displacement of the stomach, which in the living and erect condition of the subject extended as low as the anterior superior process of the ilium, (for the knives were distinctly felt near that part a few days before death,) shows how much

the position of this organ is influenced by the weight of its contents and its disordered action, and also, that its true position in disease cannot be estimated with exactness.

My researches have not furnished me with many cases of Polyphagia. The following are the most remarkable that I have met with: The galley slave of Brest, recorded by Fournier; in this case, the stomach was found after death to contain fifty-two articles, weighing two pounds, and consisting of pieces of wood, iron, glass, spoons, a knife, and a part of an iron hoop, nineteen inches long and one wide. A second case is recorded in the Dictionaire des Sciences Medicales, vol. 4, page 199, related by the Baron de Percy—Tarran's propensity was conjoined with Bulimia; and his voracious appetite led him to devour, indiscriminately, dogs, cats, insects, excrement, putrid meat, &c. One of the former volumes of this Journal, also contains a case of Polyphagy, similar in many respects to the one I have here recorded.

A case of Epilepsy supervening on the expulsion of a Tænia, by Dr. Abraham Cornelison, of Clarkstown.

Nearly three years ago I was consulted by a female, aged eighteen years, for a pain in her stomach and bowels, which was very severe at times, and judged by her parents to be colic. I directed her to take a cathartic of calomel and jalap occasionally, according to the urgency of her complaint, and to continue this plan of treatment some time, with the view of obviating any intestinal obstruction. Some months after she informed me, that her complaint continued, notwithstanding the repeated use of cathartics, and that she had voided, by stool, several pieces of a flat jointed worm. On which I put her on the use of large doses of pulvis stanni, to be taken for three successive mornings, and

to be followed on the fourth by a powerful dose of calomel and jalap. The cathartics brought from her a considerable length of tænia; and for several weeks after, she continued perfectly relieved from all intestinal irritation, and enjoyed good health; but at the end of this time, the abdominal pain returned, and fragments of tænia were discovered in her alvine evacuations. I then gave her the mineral solution of arsenic in full doses thrice a day; which in a few days caused the expulsion of a long piece of tænia. The abdominal pain a second time left her; and I felt the fullest confidence that this troublesome animal, always difficult to conquer, had been at length ousted from his hiding place; but after the lapse of some weeks I was again disappointed; for her malady returned with the same symptoms as before. I now gave her the spirits of turpentine in large quantities, for three successive mornings, which proved cathartic, producing great heat through the intestinal canal; much excoriation about the anus; and evacuations of a considerable quantity of gelatinous stringy matter, which I judged to be the remains of the tænia. From this time to the present, which is more than a year, she has continued entirely free from any signs of worms or other uneasiness in the abdominal region; but shortly after having had the worm destroyed by the spirits of turpentine, she became affected with frequent attacks of epilepsy. As the patient was of a full habit of body and plethoric, I submitted her to a depletory and antiphlogistic course of treatment, but without any benefit; and as an inveterate case of epilepsy, of long standing, in my neighbourhood, had lately been completely relieved for more than a year, by the exhibition of the spirits of turpentine in small quantities, I determined to give my patient a particular trial of the remedy. She takes twenty drops of the medicine night and morning, and it is now nine weeks since she commenced this course, during which time she has had no paroxysm of the disease.

I am inclined to attribute the epilepsy in this case to the removal of the irritation of tænia, which irritation, from long continuance had become habitual. Similar instances are impressed on my mind from authorities, when from the want of an accustomed stimulus, or irritation; mental derangement, convulsions, epilepsy, and various other nervous affections have ensued. If my suggestion be correct, the removal of the disease by the spirits of turpentine may be accounted for by supposing that the stimulating properties of this remedy supplied the place of the morbid irritation of the tænia; at any rate, I think we have just grounds for believing that epilepsy arises more frequently from gastric and intestinal disorder, than from idiopathic derangement of the brain.

February 12, 1821.

A case of Arm presentation, attended with untoward circumstances, in which the child was extracted in a peculiar manner, by Alexander H. Stevens, M. D.

I was called in the night of March the 9th, 1819, to a village about ten miles from this city, to visit a lady who was represented to have been in labour since the morning of the preceding day.—She was healthy, well formed, and the mother of several children. For three months previous to her confinement, she had been obliged to keep her bed, in consequence of a strain in getting out of a waggon, and her feelings had led her to anticipate unusual difficulty in her accouchement. Two medical gentlemen were in attendance, one of whom had been sent for only a few hours before I arrived. What the original presentation had been, could not be ascertained; but the cord was stated to have protruded, and the waters to have been discharged in the first periods of the labour. The practitioner last called in, after an ineffectual effort to turn the child, had brought down the right arm, which, as far as the elbow, was without the external parts, and in some measure deprived of the cuticle:

there was no pulsation in the cord. Since the preceding morning the pains had been severe, and now they had the peculiar character which usually attends the last stage of parturition: the external parts were exquisitely tender.

When she consented to an examination, I found, by the feel of the shoulder, the spine, the ribs, and the right side of the lower jaw, that the child lay with the trunk across the pelvis, with the head to the left side, and the buttocks to the right of the mother; the back to the abdomen, and the sternum to the posterior surface of the uterus. The following cut illustrates my idea.

As the bladder had emptied itself, and as there was great fulness of the pulse, it was deemed advisable to take some blood from the arm and administer a large opiate, in the hope of gaining a truce from the unremitting pains, to turn the child, and bring down the feet. In this hope we waited from four o'clock of the morning of the tenth, until seven. But finding the pains continued, and judging that no advantage could result from further delay, as the pulsation had ceased in the cord, and the child was unquestionably dead, I cautiously introduced a blunt bistoury, and dissected off the right arm, the woman lying on her back, with her feet over the foot of the bed, one supported by each of the gentlemen who assisted me. I then pushed firmly on the axilla with my thumb, but it could not be pressed back. I next attempted to introduce my hand and get at the feet; a pain came on, my hand was then kept quiet; it remitted; I repeated the attempt, but with no better success: I changed hands, but the contraction of the womb increased by the slightest movement, and kept the hand firmly wedged as if in a vice. In the hope of making more room, I then opened the chest and removed the contents; when introducing first two fingers, and afterwards the blunt hook, I endeavoured by that hold to bring down the body, but ineffectually.

Another plan succeeded better, and it is chiefly with a view of suggesting this, (of which I do not recollect to have heard or read,) that the present case has been drawn up. This was the making an incision as high up on the back as I safely could, with a blunt bistoury passed along the forefinger; inserting a blunt hook into it, and pulling in a direction obliquely downwards and forwards, so as to bring the buttocks down, and having partly succeeded, I made a second incision, immediately above the hip, introduced the hook as before, and extracted the child, breech foremost. The placenta followed, and was immediately removed, in a very offensive state.

The woman bore the operation, which lasted until half-past eight, with great fortitude. The left leg is partially paralysed.

Second Day, 5 *p. m.*—The lochial discharge has been regular. Has had several severe chills succeeded by great heat of the skin, copious diaphoresis, thirst and dryness of the tongue. Is occasionally delirious, passes a great quantity of water from the bladder with difficulty. Bowels have been opened; fomentations have been applied to the abdomen, which is swollen and tender to the touch in the region of the uterus. Pulse frequent, and, except during the chills, full. Seeing a rigor coming on, I advised hot salt, in a woollen stocking, to be applied to the pit of the stomach and the feet; and a copious draught of catmint tea to be taken. The chill terminated sooner than any which had preceded it.

6 *p. m.*—Pulse full and frequent; great heat of skin; general and profuse sweating; delirium. I took ʒxiv of blood from the arm. It was agreed to apply spirituous fomentations to the abdomen, a poultice of linseed, with solution of the acetate of lead to the pudenda, and to give of the acetite of ammonia ʒss every two hours.

9 *p. m.*—Symptoms rather improved. She was again bled to ʒxii. Sinapisms to be applied to the feet.

Fifth Day.—Rigors have been less severe; tongue furred, and somewhat yellow. Skin constantly moist; occasional delirium. Bowels confined. Agreed to give three grains of calomel at night; a solution of Epsom salts on the following morning. Sinapisms to the abdomen.

Seventh Day.—The medicine operated well. Tenderness of the abdomen lessened; pulse soft and frequent. Complains of want of sleep; we prescribed the effervescing draught, with forty drops of laudanum.

Eleventh Day.—Continues to improve. Has taken an infusion of hops—agreed to continue it, and to give freely of nourishment.

Fourteenth Day.—Better—is able, for the first time, to move the left leg, and to move on her knees from one bed to another. Is allowed the use of animal food.

Seventeenth Day.—Appetite good—strength returning—has set up in bed several times.

Mrs. V. has since entirely recovered.

Case of Cataract, by Dr. Hunting Sherrill, of Hyde Park, Dutchess County, New-York.

Should you consider an account of two successful operations for Cataract, worthy of record in the Medical Repository, they are at your service.

Andrew, aged about 65, put himself under my care on the 10th of May, 1821, affected with Cataract in both eyes, which he had laboured under a length of time, and which produced total blindness. The eyes appeared to be in a fit situation to be relieved by an operation, and as no remedy except that, promised to be of any service, I proposed removing the opaque lenses by couching.

To perform the operation, Scarpa's Needle was selected, and after some previous preparation, I operated with the right hand on the left eye, on the 22d of May. In introducing the needle into the ball of the eye through the sclerotic coat, I followed the direction, among others, of John Bell, and entered it about three lines posterior to the iris, and just below a line which would be formed by a horizontal section of the eye ball, so as to avoid wounding the ciliary processes and the ciliary artery. The instrument was carried upwards and forwards over the anterior part of the opaque lens, where it was plainly seen through the pupil. The curved point of Scarpa's Needle proved very convenient to lacerate the anterior capsule, and then by turning it backward, the lens was inclosed in its concave side, and carried downward and back-

ward to the bottom of the globe of the eye. He immediately observed, that "he saw light that was bright and handsome." The needle was steadily withdrawn, and the eye immediately closed and dressed with saturnine compresses, and he was taken to a darkened chamber. The inflammation was very moderate, and so far subsided in a week, that the bandage was removed, and he could see his way tolerably well. On the 31st, with the left hand, I operated on the right eye, with the same needle, observing the same general rules. In this operation, after lacerating the anterior capsule very extensively with the curved point of the needle, it was turned backwards and hooked over the lens, which was depressed; when the point of the needle was raised, it was perceived that the lens rose also. The needle was again applied to it, and it was depressed again. On raising the point of the needle the second time, the lens followed it, and it was depressed the third time, when it remained, and the instrument was withdrawn. The eyelids were immediately closed, and the compresses applied. The antiphlogistic regimen was pursued. On examining the eye on the third day, an opaque flocculent substance was observed in the posterior chamber; this, however, was all carried off by absorption, and the aqueous humour of the eye became clear. In about a week, the inflammation had subsided, so that the bandage was removed, and a local shade hung over the eye, and he was permitted to leave the dark chamber, and take his course about the yard and garden. His sight was as perfect, perhaps, as it could be, considering his age and the absence of the chrystalline humours. He could immediately distinguish colours and see his way without difficulty, so that he hoed in the garden considerably, and did some light work. He was discharged the 10th of June, enjoying good health.

In closing this account, I should do injustice to my feelings, were I to omit to mention the counsel and support on this, as on other occasions, afforded by the President of your Col-

lege, the late venerable Dr. Bard, which is the more interesting, as it was one of his last professional acts, and also the kind assistance in the operation of Drs. Tomlinson, Judd, and Pells.

Hyde Park, August, 1821.

A case of Epilepsy, arising from abdominal derangement, and inducing temporary fatuity, by John S. Westervelt, M. D. resident surgeon of the Bellevue Establishment.

Catharine H. a pauper in the Bellevue Alms-house, aged eleven years, of sanguine temperament, and hereditary predisposition to epilepsy, was brought by her mother to the hospital of the establishment, for medical aid, in June last. The child's abdomen was considerably swollen; the left side much more so than the other parts, and the whole so tense, that it could not be certainly ascertained whether the tumour arose from the presence of water or air: it was judged to proceed from a combination of these causes. The mother said the swelling had existed several weeks, was gradually increasing, attended with obstinate costiveness and frequent desire to pass urine, which was discharged only in small quantities, and did not exceed half the ordinary amount. She had no fever, her appetite was tolerably good, and she had still sufficient health to attend school. Several active purgatives, composed of the supertartrate of potass and jalap, were successively administered, and at the same time, she took daily of the supertartrate of potass as a diuretic. This plan was persevered in for several weeks, without producing any relief; the bowels were only partially evacuated, and the flow of urine continued scanty as heretofore. A large dose of calomel was then given, which produced copious discharges from the bowels, and a slight ptyalism. From this time, she became affected with convulsions, and a total suppression of

urine. The convulsive fits were, in some respects, peculiar; she became suddenly deprived of sense and voluntary motion, fell back in deep stupor, with the eyes fixed, and the respiration stertorous: the convulsions commenced partially and feebly, producing at first what might be termed a tremor; but which gradually increased in violence, and finally agitated every muscle of the body with convulsive action: the patient, at this time, tossing about the head, and blowing alternately from either corner of the mouth. This agitation continued 5, 10, or 15 minutes, and then gradually subsided, leaving her, from appearance, in a sound sleep, from which she would very soon suddenly arouse, with a look of surprise, as if just awaked from a dream of terror. These paroxysms were some times repeated in quick succession, leaving but short intervals of tranquillity, and amounting to twenty or thirty in the course of a day. To be assured of the state of the bladder, a catheter was introduced at three several times, but not a drop of urine followed.

The patient was now treated by the active employment of venesection, purgatives, and blisters, but the convulsions remained unabated 'till the month of September, when she was put on the use of calomel, exhibited in repeated doses, together with the use of diuretic medicine. This produced large watery evacuations from the bowels; but both mother and child still averred that there was no discharge of urine from the bladder. The swelling of the abdomen now began to lessen, and was not nearly as tense on the left side as formerly, so that a fluctuation could be perceived in that part, and the right gave the tympanitic sound. Notwithstanding the continued use of purgatives, which indeed were constantly rendered necessary by the obstinate costiveness, and a succession of the most esteemed diuretics, the epileptic fits continued until the ensuing March, when they gradually, and I believe, spontaneously left her, as well as the tumid and

unnatural state of the abdomen. The total suppression of urine, if we may credit the mother and child, still continues, although the child has regained her former healthy condition.

After the epilepsy had existed about three months, her mind was observed to give way, under the violence of the disease, and before its final subsidence, the child became completely fatuous, had forgotten all she had ever learned at school, and was excessively peevish and fretful. Her ill temper still continues; she appears to have entirely recovered her intellect, and on being returned to school in May last, in the course of six weeks recovered her lost knowledge, again acquired the alphabet, and learned to read and spell as well as she had done before her disease.

October, 1821.

Account of an extraordinary Tumour on the Genital Organs, successfully removed by an operation. By J. T. Olinade, M. D. of Montpelier.

Babtiste Autier, aged 35 years, of a cool and impassive disposition, athletic habit, and melancholic temperament, contracted a chancre on the base of the glans penis, when a *gendarme* in Catalogne, four years before he entered the civil hospital of Montpelier. Unwilling to interrupt his laborious duties, and unable to employ the usual treatment, he made a strong application of lunar caustic to the surface of the ulcer, which immediately induced a considerable tumefaction of the prepuce, and shortly after of the whole penis; and being almost always on horseback, he was from the injurious nature of this exercise, forced at last to return home. By means

of a confinement of fifteen days, a sudorific ptisan with nitre, and mercurial frictions, the parts were reduced to their natural size and the chancre disappeared.

Notwithstanding the parts were brought to their former tumified state by a single day's ride, the patient returned to his station, and remained on duty a month. By bad living, fatigue, and especially constant exercise on horseback, the disorder was so much exacerbated, that the external organs of generation became swelled to a considerable size, and the act of walking was attended with severe pain. As the disease progressed, the skin of the scrotum and penis, grew hard and scirrhous, and could not be pinched up with the fingers. It formed at length, a tumour which, in four years, acquired the following dimensions. Hanging by its own weight, as the patient stood up, it reached from the pubis, some inches below the knee. It measured in circumference, at its base, which was of the form of a pedicle, 18 1-2 inches, at its middle 39 1-2; in diameter from before backwards, about 12 inches, transversely about 10. Its weight, as nearly as could be ascertained while it was attached to the body, was about 25 *killogrammes*.* It was of a dark red colour, marked behind and before with slight furrows and projections, which might be compared to the irregularities and convolutions of the brain. The orifice of the urethra was deeply hidden behind a formless colliflower excrescence, which formed the lower part of the tumour. In this shapeless mass were concealed the penis, testicles, and spermatic cords in such a way, that their relative situation could not be discovered; *attamen integritatem semper, tenebant, nam erectiones nocturnasque emissioness sæpius expertus est æger.* The tumour was inconvenient only by its weight,

* Between fifty-five and fifty-six pounds.

and possessed so little sensibility, that a pin could be run into it for upwards of half an inch, without producing pain.

Such was the state in which Professor Lallemand found Autier, on his entrance into the hospital of St. Eloi; and he thought proper considering the original cause of the disease, to put the patient, in the first place, under a complete anti-syphilitic treatment, which was kept up twenty days without affording any relief. Professor Delpech, who then took charge of the institution, gave up the use of internal remedies, and planned an operation with the object of dissecting out the genitals, restoring them to their functions, by extirpating the tumour, and he performed the same on the 11th of September following.

The patient was laid upon a bed, his shoulders elevated, his limbs held by four assistants, the tumour enveloped in cloths, gently supported by two others. The operator first traced out with a pen and ink, the lines he intended to follow with the knife. From the thin lax skin over the base of the tumour, he next cut two lateral flaps and one anterior flap, designed to cover the organs after dissection, and gave them to the assistants who held them aside. He then proceeded to lay bare the spermatic cords down to the testicles; but he mistook for the spermatic vessels, a vascular string accompanying the external pudic artery, and his error, which was discovered too late, rendered this stage of the operation tedious and severe. He finally brought out the testicles, which were sound, turned them back upon the abdomen, exposed the whole penis, and after the patient had rested a minute, completed the removal of the tumour in a few seconds.

The operation lasted fifty-seven minutes, during and immediately after which, the quantity of fluid, bloody or serous, discharged, was calculated to be upwards of six pounds. More than thirty ligatures had been applied as the vessels were successively divided. The testicles were in-

closed in the lateral flaps, which supplied the place of the scrotum, the penis was infolded in the anterior flap, and the whole supported by many stitches and a proper bandage. The patient had not uttered a single cry during the operation, but when it was over, his pulse was found low, wiry, and scarcely perceptible, his face pale and features contracted, his extremities chilly, and his whole body in a cold sweat; yet his respiration was regular, his senses were clear, and he expressed a firm hope that he would soon recover. Before the dressing, two grains of opium were given, and afterwards, oxicrate and veal broth with nitre were prescribed. to be taken alternately. The patient's organic motions were soon renovated, and having taken one grain of opium twice in the course of the day, he passed a good night, and enjoyed a quiet sleep of five hours. His pulse rose to 106, 108, 130, at which height it remained the three first days. To conclude, the parts were perfectly healed in three months, no marks remaining except the lines of adhesion; the testicles in their new covering are capable of so much motion as to be able to mount to the abdominal rings; the penis unerected is one inch long, and four fingers' breadth when in erection. The only occurrence during the cure worthy of remark, is that of a gangrene which separated the end of the covering of the penis, leaving the glans naked and surrounded at its base by a circular cicatrice.

The tumour, examined after its extirpation, was found to weigh 56 pounds. It was composed of a thick serum inclosed in the distended cells of the cellular tissue, which had acquired a considerable thickness and density, as had also the skin of the scrotum, to such a degree, that it was completely disorganized. The parts diseased were nourished by vessels pretty large and numerous.

The mere detail of this operation is sufficient to convince any one, that to support it. the patient must have been possessed of patience and fortitude, and the surgeon of decision.

firmness, and ability, to bring it to a happy termination. The only thing now to be feared is, that if Autier's disease was kept up by the remains of a venereal complaint imperfectly cured, there may be some danger of a relapse, which should therefore be guarded against by continuing the remedies previously employed by Professor Lallemand.

Journal Universal, June, 1820.

INTELLIGENCE.

Remarks on the origin and nature of Amber.

The origin of amber has hitherto been referred to various causes, and we are in possession of no fact, the analogy of which might throw light upon the subject. Our knowledge on this point has been no way improved by the discovery in 1785, at a place near Castleton, in Derbyshire, of a substance found in the fissures of an argillaceous schistus, possessing the appearance, softness, and elasticity of gum elastic, denominated by reason of the resemblance, mineral or fossil caoutchouc. Baron de Humbolt, with the sagacity characteristic of his great genius, has made some observations, which may prove useful in clearing up this question. From them, we have thought proper to draw a few inferences, which, though merely hypothetical, are at least more plausible than the conjectures heretofore advanced. The following is an extract from the Baron's remarks.

At San-Baltazar de Atabaspo, L. 3°, 14′ N.* he saw in the huts of the natives, stopples made of a white fungous substance; of which he immediately recognised the analogy to

* The Atabaspo falls with the Guaviari into the Orinoco, at the point where the latter river changes its course to the line of the meridian, from a direction parallel to the equator.

gum elastic, and which, in point of utility, he considered preferable to cork. Having been informed that this article, called by the inhabitants, *Dapicho*, was found in the earth, he imagined it to be a fossil caoutchouc, but differing from the elastic bitumen of Derbyshire. Shortly after, he had an opportunity of examining the subject himself, upon his arrival at Javita on the river Tuaminci, which falls into the Atabaspo, in junction with the Temi. He then observed that, to procure the dapicho, it was necessary to dig to the depth of three or four feet, in marshy ground, between the roots of two trees, known by the name of *Jacio*, and *Curvana*. The former is the *siphonia* of modern botanists, which furnishes the caoutchouc of Cayenne and Grand Para. The latter has pinnate leaves, and a juice which is milky, but very thin and possessing scarcely any viscidity. The dapicho appears to be the product of an exudation of the sap from the roots, which takes place, especially when the trees have attained a great age, and the inside of the trunk begins to decay. The bark and part containing the sap, split open, thus spontaneously affecting the operation made by art, to obtain in abundance the lacteous juices of the *castilloa*, *ficus indica*, and *hævea caoutchouc;* which is performed by surrounding the trunk near the earth with a deep circular incision, down to which, oblique or perpendicular slits are made from as high up as possible.

If, as every circumstance indicates, the accumulation and exudation of the sap be a pathological phenomenon in the Jacio and Curvana, it must sometimes occur at the extremities of the longest roots; for masses of dapicho, two feet broad and four inches thick, have been found at the distance of eight feet from the trunk of the tree. Frequently none of this production is found on digging at the roots of the dead trees, and at other times it is obtained from those which are still green. It is a substance white, corky, and brittle; perhaps takes a considerable time for its formation, and is

very probably a juice thickened by a peculiar state of the vegetable organs, poured out and coagulated in a moist soil removed from the influence of light. It is a modification of gum elastic, or rather withered caoutchouc. We are justified in regarding it in this light, from the changes produced by the action of heat in the preparation of it as follows. Several pieces are at one time put upon a stick, and roasted as we do meat, which become of a dark colour in proportion as they soften and acquire elasticity, and the resinous aromatic odour they then exhale, shows this hue to be the effect of decomposition of the carbon of hydrogen, the former being set at liberty as the latter is consumed at a low temperature. After this process, the lumps are kneaded in bowls of three or four inches diameter, and left to cool. They then differ from common elastic gum only by being a little viscid on the surface, and are cut into stopples for use.

Now let us apply these facts to what we know of the origin of amber, which is confined to a mere acquaintance with the places where it is found. We observe that dapicho is the result of an exudation of vegetable juices from the roots of trees, and, notwithstanding the uniformity of temperature, the trees of the torrid zone experience in the round of vegetation, periodical changes; that effusion is consequently pretty regular. May not a similar effect, therefore, have taken place in the roots of certain resinous trees (analogous or not to those now existing about the Baltic sea) before the last changes of the globe, in the circumpolar climates, where the alternate ascent and descent of the sap are much more strongly marked. If this idea be correct, amber is nothing more than a *vegeto-fossil* production similar to the withered caoutchouc; and in proportion as the beds where it lies are washed by the waves of the Baltic, or the rivers flowing therein, it will be thrown upon the shores.

This conjecture, it is true, may be as false as the others

previously hazarded: but a more important thing is, to fix the attention upon the various uses to which gum elastic may be applied. If in the settlements only on the upper Orinoco, application be made to procure as much as can easily be obtained without propagating the proper trees by cultivation, all civilized Europe might be supplied with enough for its consumption. In South America, caoutchouc has already been employed in making boots and shoes without seams. With suitable preparations of it, gloves and other articles of clothing might be manufactured possessing the advantage of being impermeable to water,* which would be almost incalculable in a climate always humid, and where the soil is constantly wet from rains and inundations. It may also be usefully substituted to cork for stopping vessels; as certain liquids, especially those containing salts of iron, are liable to be decomposed by the tannin of the former.

[*Tablettes Universelles.*

VACCINATION.

Dr. Jenner's Circular to the Medical Profession, pointing out the causes of those affections which have occasionally followed Vaccinia and Variola, known by the term Varioloids. Communicated under the author's authority by John Fosbroke, Esq.

Presuming that you are conversant with the practice of Vaccine Inoculation, according to the instructions which I have formerly published, and that you may have seen, in addition to my general observations, those which I have since

* Caps, surtouts, aprons, &c. have been made and sold in New-York, composed of silk covered with a varnish of gum elastic. Ed.

made and promulgated, respecting the "Varieties and Modifications of the Vaccine Pustule, occasioned by an herpetic and other eruptive states of the skin," I take the liberty of requesting to be informed, whether the observations acquired in your own practice coincide with mine? That is to say, whether the Vaccine vesicles, under these contingent circumstances, go through their course with the same regularity as when the skin is free from diseases of this description?

Secondly, Whether, on the other hand, such individuals are more liable to resist the legitimate action of Vaccine lymph when inserted into the arms, than those who are free from such eruptive affections?

Thirdly, Whether you have met with cases of Small-Pox, or what has been termed the Varioloid Disease, after Vaccination; and if so, whether in such cases you ascertained those deviations at the time of vaccination in the progress of the pustules on the arms, which I have described as liable to take place when the skin is affected with herpetic and other eruptions?

As you may not have the paper before you, to which I here allude, nor the short series which followed it, I will point out the periods of their publication, and where they are to be found. The first was published in the Medical and Physical Journal, No. 66, for August, 1804, and gives an outline of the subject, of some extent. It points out the fact, that a single serous blotch upon the skin, existing during the progress of the Vaccine vesicles on the arms, may occasion such irregularity and deviation from correctness, that Vaccination under such circumstances cannot be perfectly depended on.

I have found abrasions of the cuticle to produce the same effect; such, for example, as we find in the nurseries of the opulent, as well as the cottages of the poor, behind the ears, and upon many other parts where the cuticle is thin. Happily we find no irregularity in the Vaccine vesicle in an uncontaminated skin; but we find it if the skin is beset with

these herpetic blotches, or even simple serous oozings from an abraded cuticle. It is not to be considered as of less consequence when occupying a small space; a speck behind the ear which might be covered by a split pea, being capable of disordering the progress of the Vaccine vesicle. Dandriffe may be considered as a malady of this class, the incrustration on the scalp being formed from excoriation beneath; and however slight, for there is every gradation between a thin scurfy layer of a dirt-looking substance, or even patches of this thin crust, and Tinea itself. However, fortunately for the safety of the Vaccine practice, and fortunately too for the ease of the practitioner, all these affections of the skin may be removed with very little trouble.* Sore eyelids are also impediments to constitutional Vaccination.

The second paper relating to this subject was given by the late Dr. Willan, in answer to the following interrogatory, addressed to me by himself:† "What are the changes produced in the vesicle, when a person is affected during Vaccination with the Shingles, the Vesicular Ringworm, or Impetigo?"

To this question I made a full, and, I believe, a satisfactory reply. Its purport will be shown by quoting a few sentences from it. "To answer this question in its fullest extent, would lead me through a wide field of observation, which I mean to go over at a future time; but the following answer may probably convey to you as much information upon the subject as you may now require."—"Vaccination, under the

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* The most effectual application which I know for subduing these cuticular diseases, that produces impediment, is the Unguentum Hydrargyri Nitratis, as much lowered with Unguentum Cetacelì, or any other bland ointment, as the irritability of the subject may require. The Dandriffe demands a double process—the *first* consists in removing the incrustations, the *second* in subduing the oozing. There are skins that will not well bear unctuous applications; the desiccative lotions may then be made use of two or three times a-day; such as those prepared with the sulphate of zinc or superacetate of lead, &c.

† It was published in the year 1806, in his Treatise on Vaccine Inoculation.

circumstances you mention, usually produces a striking deviation from the perfect character of the Vaccine vesicle at some period or other of its progress, but more frequently in its early, than in its declining stages; indeed, it is commonly perceptible in a day or two after inoculation. It would be difficult, perhaps impossible, without the aid of drawings, to give a correct description of the varieties which an herpetic state of the skin is capable of producing, from those trifling deviations which prove no impediment to the Vaccine security, up to that point of imperfection in the vesicle which affords no security at all. Perhaps I commit an error in saying "*no security at all*," for it strikes me, that the constitution losses its susceptibility of Small-Pox contagion, and its capability of producing the disease in its perfect and ordinary state, in proportion to the degree of perfection which the Vaccine vesicle has put on in its progress, and that the Small-Pox, taken subsequently, is modified accordingly.* When no deviation takes place in the ordinary course of the Vaccine vesicles, or when it is inconsiderable, the Herpetic blotches or vesicles, of whatever kind they may be, often assume (sometimes as early as the third or fourth day after the insertion of the Vaccine fluid) a new character, not unlike the Vaccine, and, keeping pace in their progress with the vesicles on the arm, die away with them, leaving the skin smooth."

These two papers comprehend, first the simple fact of important deviations being produced by diseases in pre-occupation of the skin; and, secondly, a general account of the characters of these deviations, and their differing degrees of influence upon the Vaccine protection.

Some further observations were published by Dr. Wilson

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* Further observation has confirmed this opinion, and has also developed much other curious matter respecting the spontaneous blending of the herpetic with the vaccine fluid, through the medium of the constitution, when under the influence of Herpes.

The third division of the Philosophical class, is that of NATURAL HISTORY, which embraces Mineralogy, Botany, Descriptive and Comparative Anatomy.

With each of these three divisions. subjects are connected, which more exclusively appertain to the soil and fossils of the country. Mineralogy, for instance, is divided into Geology, Oricrology, and Docimasia, owing to the great importance to the inhabitants of rich metals and other fossils in the mountains of Peru.

The second class of studies in the College of St. Ferdinand is exclusively medical, and engages the daily task of ten professors, in the general division of the theory and practice of medicine. Under the first division, are taught the sciences of *Zoonomia* or *Physiology*, of *Pathology*, and of *Psycology*.

ZOONOMIA is a science embracing the laws of organic life, the regularity or abolition of its functions, and is immediately connected with a treatise on Hygiene. PATHOLOGY comprises Nosology, Semeiology, and Therapeutics. PSYCOLOGY is directed to the subject of human perceptions, their power or attributes; their connexions with our corporeal senses, and their diseases as well as their remedies.

The second division of the Medical class, is the *practice of Medicine*, Clinical, Operative, Obstetric, Pharmaceutic, and Topographic. It therefore establishes five distinct courses of lectures, absolutely necessary to complete the education of young physicians.

The TOPOGRAPHIC medicine merits our particular notice, as it directs the student to the nature of the climate he inhabits, its temperature, atmospheric vicissitudes, and meteorological phenomena; to the productions of the earth, to the manners and customs, which with many other localities, concur in the formation of epidemic and endemic diseases, to which the skilful and intelligent physician must always be ready to afford prophylactic and curative applications.

Supernumerary studies are required in this seminary of learning; principally the languages, and the art of drawing. The students are once a week invited to take walks, with a view to bodily health, and the acquirement of useful knowledge; and all these advantages are to be obtained under the following regulations:

1st. The sciences or treatises which more particularly require the application of the understanding, and exercise of the memory, are to be pursued during winter. Those which more readily gratify the imagination, to be attended to in summer.

2dly. The Professors are directed to cause their students to alternate, for a time, the lectures in the medical class, with any course in the philosophical class, in which they may be required to refresh former lessons, and thus always retrograde a little in order to advance the more.

3rdly. The languages and art of drawing may be taught at night.*

4thly. The walks of the philosophical students, may be directed into the fields, to the mills, mines, artificers shops, and botanic gardens, according to the branches of their studies; and those of the students of medicine, into the hospitals.

5thly. It is required from each candidate for admission into the College, to exhibit satisfactory proofs of his previous instruction in writing, and in Latin grammar; and that he be possessed of an intelligent mind and good character. Thus

"Purpureo bibet ore nectar."

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* The art of Drawing, here meant, is that which is founded upon mathematical rules of proportion, and is not intended as a branch of the fine arts, to the acquirement of which candle-light is by no means adapted.

Philip, M. D. of Worcester, in an appendix to his work on Febrile Diseases, who requested some information from me on this interesting subject. This letter goes more into detail than the former, though its purport is the same—namely, to guard the practitioner against the insidious influence of a diseased skin, when he vaccinates. It will be an object of future consideration, to enter more generally into the minutiæ of this subject; but a sketch like this does not afford scope for the completion of such a design. Let me advise every practitioner, not to confine his cautions, nor to narrow my meaning, to one class of eruptive affections only. In short, every disease of the skin, which may be called *serous*, or one that sends out a fluid capable of conversion into a scab, has the power of exerting this modifying and counteracting influence; and I have also seen purulent fluids exert a similar influence in producing deviations. If I was asked what were the other actual impediments to perfect vaccination, as a general answer I should say, that I scarcely know any other except spurious matter,* or impediments too obvious to require my naming them here, such as deranging the Vaccine vesicle in its progress, by incautiously robbing it of its contents, or producing a new action by external violence.

[*Edinburgh Medical and Surgical Journal.*

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* I am happy to see that these interruptions are now discovered in Germany, as appears in Professor Hufeland's Journal for June 1819, an extract of which is given in the London Medical Repository, vol. xiv. p. 502.

In addition, see Bateman's Synopsis of Cutaneous Diseases, pp. 222, 223.—Cross's History of the Variolous Epidemic at Norwich, 1820, pp. 60, *et seq.* 196, and 288. I was lately puzzled to find the cause of irregularity in a Vaccine vesicle, the skin being free from any apparent eruption; upon minute inquiry, I discovered a whitlow on the thumb, in which suppuration had taken place.

St. Ferdinand College of Physicians, in Lima.

This flourishing Institution, in the largest city of South America, was founded by Charles IV., shortly before his abdication of the throne of Spain, and annexed to the Royal and Pontifical University of St. Mark. It was immediately after placed under the protection of the present monarch, with the titular and distinctive name of *St. Ferdinand.*

The plan of studies in this seminary, was arranged by the celebrated Unanue, a principal director, and was adopted under the sanction of the government in the year 1808. We have been induced to make it the subject of our remarks, because we think it one of the most perfect systems of education, calculated to advance the progress of medical usefulness and eminence, in that fine section of the New World, which has hitherto been little known to us; and because we wish to present our homage of respect, good-will, and fellowship to the Professors and Graduates, who have long been the readers of our old-established Medical Repository of New-York, as appears from their numerous Spanish and Latin Inaugural Dissertations, in our hands.

The students in the College are divided into two classes; that of *Philosophy*, and that of *Medicine.*

To the first class, seven professors are appropriated and charged to teach in their different branches, the three distinct sciences, *Mathematics*, *Physics*, and *Natural History.*

Under the denomination of mathematics, four or five divisions of studies are comprised; viz. Arithmetic and Algebra, Geometry, Mechanics, Optics and Astronomy. The subsidiary branches of these and other sciences, are devised to the professors, who are not allowed to omit any of them, nor to extend their lectures to any inappropriate subject.

The science of physics indicates two distinct courses of lectures; one on Experimental Philosophy, and the other on Chemistry.

Method of destroying Tænia.

Dr. Cagnola, of Milan, proposes the prussic acid as a means of killing the whole of a *tænia cucurbitina*, in the case of part of it appearing without the anus. Authors heretofore, only recommended that it should be pulled at in various ways, in order that the whole may be withdrawn; but this practice is hardly ever successful, the worm generally breaking when any considerable force is used. Dr. Cagnola thinks that if the part without the anus were touched by the prussic acid, prepared according to Gay-Lussac's process, the whole of the worm would be instantly deprived of life. It is hardly necessary to remark, that great caution must be used if such a measure be employed: especially that the return of the portion of worm touched by the prussic acid into the intestines may be securely guarded against.

[*Lon. Med. and Phys. Jour.*

Action of Cork on Chalybeate Waters.

Mr. Wurza, on examining some bottles of chalybeate waters, was supprised to find no signs of iron in them; and on seeking the cause of this circumstance, he discovered it in the astringent nature of the corks, which had combined with the metallic substance. He advised, when chalybeate waters are kept in bottles, that the corks should be first well steeped in the waters, in order that the astringent matter they contain may be saturated with the iron.

[*Lon. Med. and Phys. Jour.*

Arsenic detected in the Membranes after Death.

In order to ascertain whether or not the serous effusion, which commonly occurs in the pleura of animals poisoned by

arsenic, arose from the absorption of this mineral. M. Lassaigne of Alfort, submitted the mediastinum of a horse destroyed by arsenic, to chemical analysis, by which means he detected the presence of this mineral.

[*Jour. Universal de Med.*

Fragility of Glass.

The Gazette of Weimar gives the following process for securing glass from breaking from transitions of temperature. Put the glass vessel into cold water, heat the water to the boiling point, and then let it cool gradually with the vessel remaining in it. By this means, the glass is rendered capable of bearing sudden transitions of temperature without cracking: it may even be cooled to 10° and plunged in boiling water without injury. In order to obtain this property to a greater extent, oil must be substituted for water.

[*Revue Encyclopedique.*

Hot Water a Remedy for Hysteria.

A respectable medical friend informs us, that he has long been in the habit of overcoming violent hysteric paroxysms by forcing the patient to drink largely of hot water. He suggests the probability that scutellaria owes its sanative power to the coloric of the infusion merely.

Superfœtation.

The Gazette of Health relates a case of superfœtation similar to the one recorded by Buffon, in his History of

REMARKS.

The United States of America has long been the seat of respectable seminaries of learning, from which numerous pupils are known to have derived considerable cultivation of their talents, for the arts of industry, and the works of inventive genius. To their own schools alone, are they indebted for that public spirit, which has diffused ordinary instruction among the lower classes of people, more certainly than it has yet been done in any other country of the world; and for their ability in organizing a system of political government, which for nearly half a century has been contributing to the honour and prosperity of the nation.

But our *Medical* schools and Colleges, a few excepted, are of recent date, and perhaps are not regulated so severely as to secure all the necessary qualifications for their students, who, after a few years, can become candidates for degrees. An excellent provision exists, however, in the State of New-York, requiring four years of pupilage or study with a physician, for an ordinary license, and three years of the same previous to the attendance at College. Yet it is to be regretted, that in either pursuit there is required no test, nor examination, to ascertain whether the student possesses as much literary and philosophical acquirement, as is thought indispensable in any of the liberal professions, and particularly in that of Medicine. The institutes of this science, and their auxiliary branches from ancient and modern authorities, present a boundless region for the mind to survey; offer infinite materials for the memory to embrace; prepare incessant difficulties for the judgment to resolve; and impose upon the adept an awful responsibility to God and man. Were we not apprehensive of appearing uncharitable, invidious, or personal, we might further assist our readers to determine by comparison and recollection, how much superior in talents and correctness of judgment, are physicians of classical and philosophical education, to those who are deprived

of such important advantages. In course of time, the latter must be placed in inferior ranks; they are frequently detected in want of knowledge, owing to their limited reading; they are often unguarded against errors in practice, because they are more confined within the timid resources of habitual routine. Their success is always doubtful, however great perchance may be their popularity among the lower classes of society, or their ascendancy among the higher, which is not always obtained by merit, science, and moral integrity.

We admire, therefore, the plan of studies pursued in the College of Physicians of Lima, they being established principally upon the basis of Mathematics and other necessary branches of Philosophy and Literature; and we may hereafter have an opportunity of exhibiting the interesting productions of its Graduates, a considerable number of which deserve to be classed among the instructive medical records and authorities of the present time.

Utility of the Piper Cubeba in Leucorrhœa, communicated by Dr. S. Trail, of Liverpool.

Having proved the utility of the Indian remedy piper cubeba, in many cases of blenorrhœa, I was led by analogy to try it on several persons labouring under leucorrhœa, and am satisfied that it is a valuable auxiliary in this troublesome disease. In every instance, it has mitigated the violence of the complaint, and in several cases has removed it. I have administered it in doses from ʒj. to ʒiij. of the powder; but many persons cannot take more than ʒi. without experiencing nausea; and ʒij. given twice or thrice a day, will generally be found sufficient. As far as my experience goes, it is most useful in old and obstinate cases of blenorrhœa: in one recent case, it seemed to have a tendency to excite hernia humoralis.

[Ed. Med. and Surg. Jour.

Man. A negro woman was delivered of male twins, one a negro and the other a mulatto. Illa tandem percontatori confitetur seipsam semel et iterum eadem vigilia, ex albo viro recedente, mauro olim concepisse.

We are informed that Mr. D. L. Rogers, of this city, is at present engaged in conducting a course of experiments, with a view to ascertain whether the accidental inclusion of the Thoracic duct in a ligature, would be necessarily fatal—he has tied this duct in two instances in dogs, near the subclavian vein: the animals in both cases have survived the operation, and recovered their wonted health and vigour.

OBITUARY.

Died lately at Portsmouth, N.H., Lyman Spalding, M. D. formerly president and professor of anatomy in the College of Physicians and Surgeons of the Western District, and for several years a practitioner of medicine in this city. It is with unfeigned regret, that we announce the death of this worthy man and enlightened physician. His mild and amiable character, his ingenuous deportment, and his active zeal and assiduity to maintain the dignity of the profession, and improve its various branches, will cause many to lament the cessation of his labours; but his intimate friends alone know, how pure and disinterested were his motives. He was the original projector of our national pharmacopœia, and aided, with unremitted diligence, in bringing the work to its present form; but an enfeebled and shattered mind, induced by chronic disease, deprived him of the cheering view of the consummation of his labours, and the profession, of one of its most worthy members.

Notices of new Publications.

Messrs. Bliss & White, have just published, an edition of Dr. Denman's Midwifery, with notes and emendations by John W. Francis, M. D., Professor of Obstetrics and the diseases of women and children, in the University of the state of New-York. We congratulate the public upon the appearance of another impression of this valuable work.

which as a body of doctrine and practice, stands unrivalled in the annals of the science. No book with which we are acquainted, so completely combines the elements of the art, with its progressive improvements; and it may with truth be said, that Dr. Denman is almost the only author who in the compass of one volume has comprised a full knowledge of the subject to which his book is devoted. It is emphatically a text book, to which every man, however intelligent, may refer with confidence, and from which no man, however ignorant, can fail to derive instruction. Dr. Francis has added many notes, not so much we presume, to illustrate his author, as to post up the latest improvements, and his tabular appendix is very interesting. The aphorisms of Dr. Denman are also bound up with this volume, and the whole is a beautiful octavo of nearly 700 pages, illustrated by elegant engravings. And although it is the least of its recommendations, it is by no means to be overlooked, that the book, taking into account the style in which it is executed, is the cheapest we have known published for many years.

The same gentlemen have also re-printed a new work by Professor Hamilton, of Edinburgh, on the use and abuse of Mercury in various diseases, with notes and an appendix, by Ansel W. Ives, M. D. of this city. We regret that the preoccupation of our pages, prevents us from presenting our readers at this time with an abstract of the novel and interesting views of Dr. Hamilton; his work is evidently the result of extensive clinical experience, enlightened by the labours of preceding writers, and will be peculiarly acceptable to American physicians, who are constantly in the habit of prescribing this powerful mineral in a numerous class of diseases, and perhaps in many instances, without being aware of its ultimate effects. The author has wholly omitted to notice the febrifuge virtues of this medicine; and this deficiency has been judiciously supplied by the American editor in the appendix, where he has treated the subject in detail, and in our opinion, added much to the value of the work.

Samuel Wood and Sons have also in press, a new edition of Murray's Materia Medica, with notes, by Dr. N. Chapman.

An Essay on Mercury, by J. W. Francis. M. D. Professor of Midwifery, &c. is also in press, and may be soon expected to be published.

OCTOBER, 1820.

PLACES.	Lat. N.	Long. W.	THERMOMETER Highest Deg. VII.	II.	IX.	Lowest Deg. VII.	II.	IX.	Mean tempera. VII.	II.	IX.	Hotest day.	Coldest day.	WINDS. N. days	N.W days	N. E. days	E. days	S. E. days	S. days	S.W. days	W. days	Prevailing.	WEATHER. Fair. days	Clou. days.	Rain. days.	Snow. days.	Prevailing.	REMARKS.
Mackinac,	45° 55′		60	70	61	28	36	30	41.40	48.45	45 61	Mon. 2.	Wed. 25.	2	3	2	1	8	3	5	7	S. E.	20	4	4	3	Fair	12th 14th and 24th snow.
Plattsburgh,	44 42	73 25	65	70	66	34	34	32	48.00	50.83	46 09	Mon. 2.	Thu. 26.	2	1		3	1	13	3	8	S.	15	11	4	1	Fair	25th snow.
St. Peters,	44 01	93 30																										No report for the month.
Sackett's Harbour,	43 55	75 57	64	76	70	30	46	43	48.22	54.29	52.54	Thu. 5.	Sun. 29.	4	3	6	1	9	2	6		S. E.	17	6	6	2	Fair	25th and 27th snow.
Portland, Me.			51	68	57	28	40	33	40 22	53.61	46 09	Mon. 2.	Fri. 27.	1	6	5	4	8	3	3	1	S. E.	14	7	10		Fair	
Fort Niagara,			62	71	58	36	38	32	46 51	53 39	48.48	Thu. 5.	Sat. 28.	1	9	3	2	2	5	5	4	N. W.	7	18	5	1	Cloudy	
Portsmouth, N. H.	43 05	70 45	58	69	78	30	35	32	47.00	53 41	47 48	Thu. 5	Fri 27.	1	9	9		4	4	2	2	N.W. & N.E	17	6	8		Fair	
Detroit,			68	74	72	30	38	34	46.22	55.80	50.03	Wed. 4.	Wed. 25	2	1	2		4	15	2	5	S.	9	20	1	1	Cloudy	24th snow.
Prairie du Chien,			60	70	58	20	40	36	38.71	51.48	41.71	Tues 3.	Wed 25	2	8	3			1	10	7	S. W.	11	14	2	4	Cloudy	10th 13th 23d. and 24th snow.
Marblehead,			60	70	51	26	41	30	44 58	55 29	46 09	Mon. 16.	Sun. 29.	5	5	2	2	3	2	5	6	W	20	4	6	1	Fair	28th snow.
Boston,	42 22	71 04	58	56	52	33	37	31	45.00	47.87	45.74	Mon. 16	Thu. 26.		4	13	3	2	3	7		N. E.	17	8	6		Fair	
Fort Armstrong,			60	88	67	22	40	27	36 55	56.19	42.35	Sun. 1.	Wed. 25.															Observ. of winds & wea. incom.
Council Bluffs,	41 31	96 42	56	80	66	22	36	45	38.87	56.64	44 35	Tues. 3.	Wed 25.	4	7			13	3	2	2	S. E.	21	9	1		Fair	
Newport, R. I.			64	70	61	36	47	43	52.90	59.87	51.51	Mon. 2.	Fri. 27.	7	5	6	2	1	3	5	2	N.	18	5	8		Fair	25th frost.
New-London, C.	41 24	72 30	68	70	68	38	44	40	53 51	59 61	55.00	Mon. 16.	Thu. 26	6	4	9	1	2	1	8		N. E.	23	5	3		Fair	
West Point,			62	64	63	51	53	50	56.67	56.00	54.80	Tues. 31	Thu. 26.															No obser. of winds or wea.
Pittsburgh Arsenal,	40 32	80 08	54	76	70	40	45	40	49.19	57.32	54.74	Sun. 1.	Thu. 26.	4	8	5	1	1	2	4	6	N. W.	26		5		Fair	
Fort Mifflin, Pa.	39 57	75 10	68	76	70	32	48	36	49.16	54.83	52.90	Thu. 5.	Fri. 27.	4	7	6	3		4	4	3	N. W.	20	9	2		Fair	
Fort Severn, Md.			74	78	76	40	48	46	57.32	61 12	59.83	Tues. 3.	Fri. 27.	5	5	6	1		9	1	4	S.	17	6	8		Fair	
Fort Washington, Md.	38 52	77 02	71	72	72	43	46	48	54.29	57.70	57 45	Wed. 4.	Fri. 27.	1	8	5	3	4		3	7	N. W.	23	3	5		Fair	
Norfolk,			79	80	85	50	60	61	63.35	69 61	67.61	Tues 3.	Thu. 26.	1	8	9	2	3		7	1	N. E.	23	4	4		Fair	
Fort Johnson, N. C.	33 54	78 10	75	84	78	50	58	57	63 48	70.19	66.77	Thu. 5.	Thu. 26.	10	4	2	1	2	9	1	2	N.	15	6	10		Fair	
Montpelier, Alabama,			70	86	79	39	60	54	54.09	63.51	61.96	Wed. 4.	Sun. 22.	7	10	3	3	3		4	1	N. W.	24	3	4		Fair	
Fort Scott, Geo.	30 43	84 38	75	89	69	60	62	63	67.51	70.80	70 16	Tues 10.	Sun. 22.	8		4	1	5	3	5	5	N.	16	5	10		Fair	
Baton Rouge,	30 36	91 18	72	88	84	40	54	58	53.74	71.22	70.12	4. & 5.	Mon. 16.	1	22			5	3			N. W.	27	1	3		Fair	The last Obser. at 6 P. M.
Fernandina, A. I.	30 45	81 57	75	85	78	50	60	57	65.54	70.96	69.64	Sun. 8.	Sun. 22.	1	8	7	2	6		5	2	N. W.	22	4	5		Fair	
Fort Gadsden,			74	86	77	48	61	52	62 06	72.54	64.67	Fri. 6.	Sun. 22.	3	6	10	4	2	1	2	3	N. E.	15	7	9		Fair	
Bay of St. Louis,			70	80	78	44	58	54	59.74	67.64	64 03	Tues. 3.	Sun. 15.		8	9		6	1	7		N. E.	21	5	5		Fair	
New-Orleans,			76	84	81	45	57	48	60 61	68 35	64 80	Wed. 4.	Thu. 26.										23	6	2		Fair	No observations of winds.
Camp Ripley.			70	85	80	48	61	50	53.25	74.32	65 45	Mon. 9.	Sun. 15.	6	4	4	2	3	1		2	N. W.	22	6	3		Fair	

NOVEMBER, 1820.

PLACES.	THERMOMETER									Hotest day.	Coldest day.	WINDS.								Prevailing.	WEATHER.				Prevailing.	REMARKS.
	Highest Deg.			Lowest Deg.			Mean tempera.					N.	N.W	N.E.	E.	S.E.	S.	S.W.	W.		Fair.	Clou.	Rain.	Snow.		
	VII.	II.	IX.	VII.	II.	IX.	VII.	II.	IX.			days	days	days	days	days	days	days	days		days.	days.	days.	days.		
Mackinac,	44	50	45	10	15	15	30.80	32.83	31.13	Wed. 1.	Thu. 30.	4	8	4	4	4	1	3	2	N. W.	5	9	7	9		
Plattsburgh,	50	56	43	15	22	16	35.43	39.33	35.00	Wed. 1.	Mon. 27.		2				15		13	S.	20	4	5	1	Fair	
St. Peters,	42	56	40	−7	10	2	26.62	37.10	28.41	Thu. 2.	Sun. 26.		2	11		9		6	2	N. E.	17	2	3	8	Fair	26th Mississippi froz. over
Sackett's Harbour,	53	60	59	20	21	20	38.16	42.76	42.63	Sat. 25.	Thu. 30.	4	2	5	2	5	3	5	4		13	11	4	2	Fair	
Portland, Me.	45	53	49	13	21	12	30.76	41.73	34.50	Wed. 1.	Thu. 30.		6	5	2	4	6		7	W.	15	9	5	1	Fair	
Fort Niagara,	55	62	62	17	18	21	37.53	42.06	36 93	Sat. 25.	Thu. 30.	1	8		1	2		12	6	S. W.	6	18	4	2	Cloudy	
Portsmouth, N. H.	46	56	45	16	20	18	34.13	40.70	36.70	Wed. 1.	Thu. 30.	3	18	2	2	2	2	1		N. W.	19	3	5	3	Fair	
Detroit,	40	60	56	24	28	24	36.56	44.00	39.26	Wed. 1.	Thu. 30	4	3	2	1	2	12	3	3	S.	10	20			Cloudy	
Prairie du Chien,	32	60	42	−6	20	8	25.84	41.80	32.29	Wed. 15.	Sun. 26	4	9	3				6	8	N. W.	14	10	2	4	Fair	
Marblehead,	47	56	45	10	20	10	31.53	42.30	33.70	Wed. 1.	Thu. 30.	1	12	2	2	1	5	4	3	N. W.	18	11		1	Fair	
Boston,	50	54	39	15	23	18	35.30	43 26	38.86	Sun. 26.	Thu. 30.		12	2			3	12	1	s.w.&s.w	19	8	3		Fair	
Fort Armstrong,	54	63	38	0	14	10	31.96	42.33	34.56	Sat. 18.	Sun. 26.	3	2	4		4	3	10	4	S. W.	13	11	5	1	Fair	
Council Bluffs,	55	59	58	−4	6	0	27.96	41.33	32.60	Wed. 1.	Sun. 26.		11	3		9	4		3	N. W.	15	15				26th ice float. in the Missouri.
Newport, R. I.	57	64	55	17	26	20	40.33	48.33	39.13	Wed. 1.	Thu. 30.	4	12	1		6		6	1	N. W.	14	8	6	2	Fair	
New-London, C.	50	60	57	22	26	24	40.80	47 90	43.00	Wed. 1.	Thu. 30.	1	9	10		2		5	3	N. E.	24	4	2		Fair	
West Point,	65	55	50	30	32	30	41.21	41.80	43.10	Wed. 1.	Thu. 30.															No obser. of winds or wea.
Pittsburgh Arsenal,	52	62	57	33	34	32	43.83	48.00	45.03	Wed. 1.	Thu. 30.		12	7	1			2	8	N. W.	17	6	2	5	Fair	
Fort Mifflin, Pa.	44	60	46	22	26	29	35.20	45.96	39.43	Wed 1	Thu. 30.		6	3	1	1	4	8	7	S. W.	19	6	4	1	Fair	
Fort Severn, Md.	54	60	58	34	36	34	43 63	48 36	46.43	Thu. 2.	Thu. 30.	3	7	3	3	1	5	3	5	N W.	14	10	4	2	Fair	
Fort Washington, Md.	60	64	63	36	41	34	47.23	52.53	50.36	Wed. 1.	Mon. 27.	3	7			2	4	4	10	W.	23	3	4		Fair	
Norfolk,	62	76	79	41	53	50	51.46	59 56	56 33	Sat. 4.	Tues. 14	1	7	15		3		4		N. E.	22	5	2	1	Fair	
Fort Johnson, N C.	65	71	79	40	53	58	55.33	62 80	62 56	Sat. 4.	Tues 28.	9	7	1	1		6	1	5	N.	18	10	2		Fair	
Montpelier, Alabama,	70	79	72	39	49	40	55.06	64 83	61.83	Fri. 3.	Mon. 13.	5	4	6	4	4	2	5		N. E.	17	5	8		Fair	
Fort Scott, Geo.	64	78	62	40	42	51	54.13	64.43	60 53	Wed. 8.	Mon. 13.	3	1	3	3		15	5		S.	21	5	4		Fair	
Baton Rouge,	72	84	81	36	41	40	54.43	65 50	63.43	Wed. 8.	Mon. 27.		5	4		5		11	5	S. W.	26	2	2		Fair	The last Obser. at 5 P. M.
Fernandina, A. I.	66	76	70	43	53	48	61 33	69 16	61.76	Sat. 4.	Mon. 13	1	4	13	1	1	1	6	3	N. E.	25	3	2		Fair	
Fort Gadsden,	64	77	69	41	61	51	55.83	69.00	56.60	Wed. 8.	Tues. 14	11	3	4	2	5	1	2	2	N.	13	11	6		Fair	
Bay of St. Louis,	60	76	64	38	44	52	54 00	61.40	59 06	Sat 11.	Mon. 27	2	3	7		8		10		S. W.	22	5	3		Fair	
New-Orleans,	68	75	69	39	50	48	53.16	62 63	56.73	Wed 8	Mon. 13										19	11			Fair	No observations of winds.
Camp Ripley.	64	84	68	32	44	50	52.86	68.46	58.36	Wed. 8.	Mon. 27.	2	6	3	1	4	3	9	2	S. W.	14	12	4		Fair	

DECEMBER, 1820.

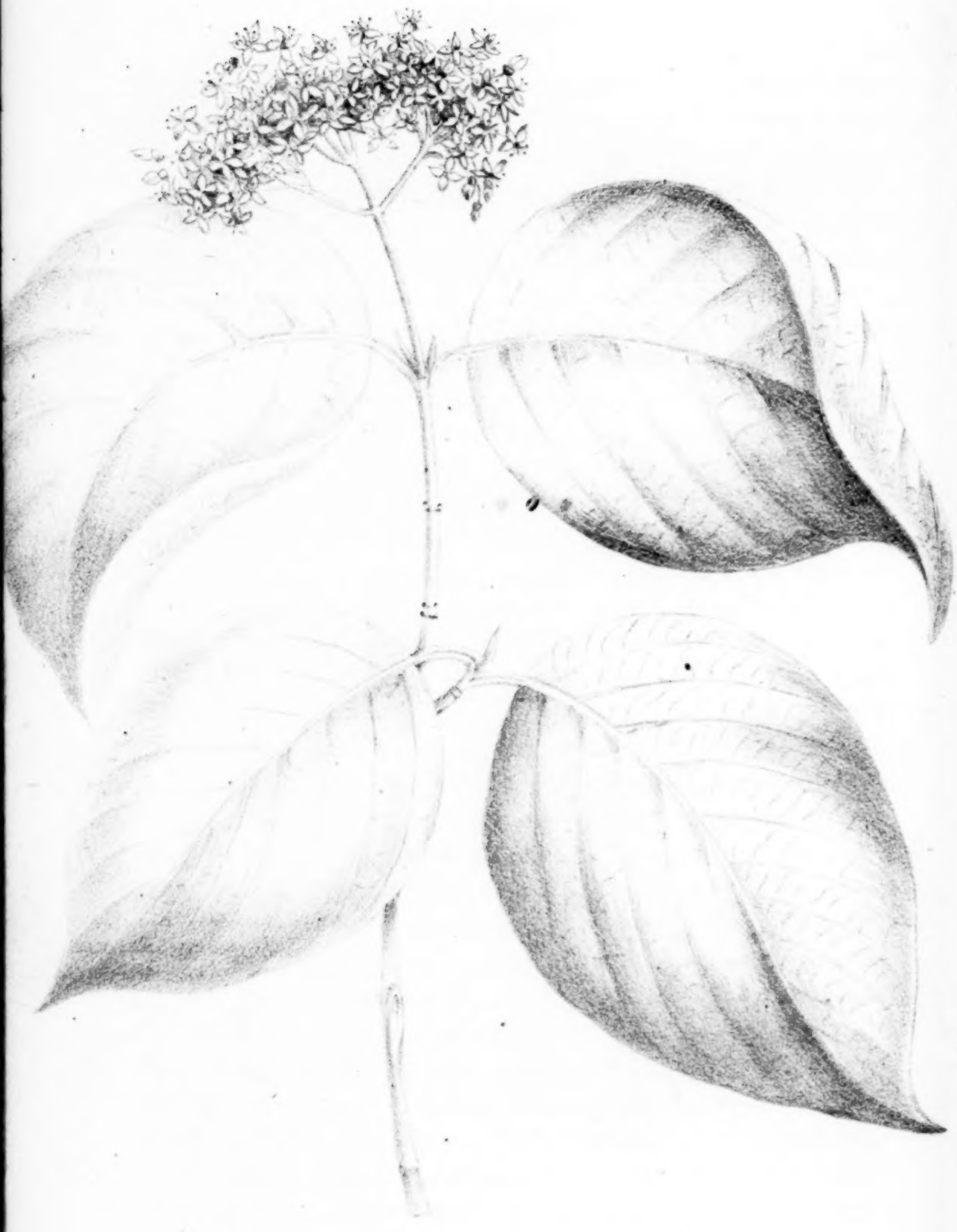
PLACES.	THERMOMETER. Highest Deg. VII.	II.	IX.	Lowest Deg. VII.	II.	IX.	Mean tempera. VII.	II.	IX.	Hotest day.	Coldest day.	WINDS. N. days	N.W days	N.E. days	E. days	S.E. days	S. days	S.W. days	W. days	Prevailing.	WEATHER. Fair. days.	Clou. days.	Rain. days.	Snow. days.	Prevailing.	REMARKS.
Mackinac,	33	34	34	4	8	10	20.48	22.35	21.48	Sat. 2.	Fri. 15.	1	5	7	2	5	2	1	8	W.	8	10	1	12	Snow	
Plattsburgh,	44	26	28	-10	12	16	21.45	23.93	21.45	Fri. 15.	Thu. 28.	9	7		1		7		7	N.	9	10	1	11	Snow	
St. Peters,	26	32	30	-20	0	-8	6.74	17.12	8.64	Sat. 2.	Sun. 31.	2	5	4		12	7		1	S. E.	20	2		9	Fair	
Sackett's Harbour,	28	40	58	-9	10	19	19.96	27.93	29.80	Thu. 7.	Wed. 27.	5	4	9	2	5	2	2	2	N. E.	9	14	3	5	Cloudy	
Portland, Me.	33	45	38	-4	10	6	16.45	24.87	20 61	Fri. 8.	Thu. 28.	4	2	8	4	1		1	11	W.	11	16		4	Cloudy	
Fort Niagara,	38	46	42	12	21	20	25.45	30.46	27.76	Thu. 7.	Sat. 23.	1	6	2	7	2	1	11	1	S. W.	3	14	3	11	Cloudy	
Portsmouth, N. H.	35	42	38	7	14	14	21.74	27.12	24.93	Tues. 5.	Sat. 23.	3	18	2		1	1	1	5	N. W.	20	3	3	5	Fair	
Detroit,	32	48	40	6	20	22	23.29	31.19	27.09	Wed. 20.	Sat. 16.	5	1	1	3	4	9	3	5	S.	13	17		1	Cloudy	
Prairie du Chien,	29	33	30	-14	12	9	11.11	20.80	17.40	Mon. 4.	Thu. 14.															Observations incomplete.
Marblehead,	33	42	31	0	12	11	19.58	26.96	21 32	Fri. 8.	Sat. 23.	6	14			1			10	N. W.	21	5	3	2	Fair	10th Aurora borealis.
Boston,	40	42	34	8	17	14	25.61	29.35	26.00	Sun. 3.	Sat. 23.		20	3		1	1	6		N. W.	17	9	2	3	Fair	
Fort Armstrong,	33	42	29	-4	7	-2	17.64	26.12	17.90	Wed. 6.	Fri. 15.	3	8	1	3		2	1	13	W.	15	9	1	6	Fair	15th Mississippi frozen.
Council Bluffs,	28	50	36	-5	3	0	12.64	25.45	17.12	Mon. 11.	Thu. 28.	2	13	3		8	3		2	N. W.	20	10		1	Fair	
Newport, R. I.	41	47	38	12	22	30	29.74	35.03	30.38	Fri. 8.	Sat. 23.	6	14	3	1	1		4	2	N. W.	16	7	5	3	Fair	
New-London, C.	44	50	47	11	27	23	29.35	36 25	33.51	Fri. 29.	Sat. 23.	3	16	7		1	1	2	1	N. W.	24	1	4	2	Fair	
West Point,	42	43	45	20	22	20	32.51	33.50	33.19	Wed. 20.	Wed. 27.															No obser. of winds or wea.
Pittsburgh Arsenal,	45	48	37	28	30	30	35.83	37.80	36.06	Thu. 21.	Sun. 31.	5	8	9	1	3		4	1	N. E.	19	3	1	8	Fair	
Fort Mifflin, Pa.	39	50	46	16	30	35	28.83	36.87	32.87	Fri. 8.	Sat. 23.	1	10	3	4			9	4	N. W.	14	8	6	3	Fair	
Fort Severn, Md.	46	48	48	32	32	32	37.90	44.48	39.42	Thu. 7.	Tues. 26	1	9	8	1	2	3	3	4	N. W.	10	8	9	4	Fair	
Fort Washington, Md.	45	58	56	32	38	33	41.32	45.70	42.67	Thu. 7.	Wed. 27.	9	9			1	1	5	6	N. & N. W.	14	8	6	3	Fair	
Norfolk,	64	65	58	40	41	40	49.25	51.38	48.58	Tues. 19.	Fri. 1.		6	14		4		7		N. E.	20	5	4	2	Fair	
Fort Johnson, N. C.	65	70	64	38	51	52	53.83	59.09	59.22	Wed. 20.	Fri. 1.	5	6	2	1		10	1	6	S.	18	7	6		Fair	
Montpelier, Alabama,	70	77	72	33	47	46	53.45	63.22	58.93	Mon. 18.	Sat. 30.	3	4	1	2	6	5	9	1	S. W.	16	4	11		Fair	
Fort Scott, Geo.	54	84	70	32	48	50	56.87	65.98	61.19	Sat. 16.	Mon. 11.	7	4	1	2	3	9	3	2	S.	14	5	12		Fair	
Baton Rouge,	70	76	74	40	58	54	53.29	64.00	62.25	Mon. 18.	Tues. 26.	1	11	3			1	15		S. W.	17	3	11		Fair	The last Obser. at 5 P. M.
Fernandina, A. I.	64	75	70	50	58	56	59.74	62.58	60.00	Fri. 8.	Tues. 12.	4	1	10	8	5		3		N. E.	19	12			Fair	
Fort Gadsden,	70	76	68	42	61	49	57.38	66.12	59.58	Sat. 9.	Mon. 11.	3	3	5	3	4	6	3	4	S.	10	13	8		Cloudy	
Bay of St. Louis,	68	72	76	40	48	46	56.45	60.51	59.96	Sun. 17.	Fri. 1.		4	9		12	3	2	1	S. E.	19	8	4		Fair	
New-Orleans,	74	77	77	39	45	49	57.06	62.12	60.09	Mon. 18.	Sat. 30										20	9	2		Fair	No observations of winds.
Camp Ripley.	62	79	72	28	44	36	44.67	65.51	50.12	Fri. 8.	Sat. 30.		7	6	3	5		6	4	N. W.	11	7	13		Rain	

MONTHLY METEOROLOGICAL TABLE FOR THE YEAR 1820,

Embracing the whole extent of the United States of America, and their Territories.

MONTHS.	THERMOMETER.							Range.	MEAN OF WINDS.								Prevailing	MEAN OF WEATHER.				Prevailing
	Mean tempera.			Aggregate of mean temperature.	Highest Degree and Place of Observation.		Lowest Degree and Place of Observation.		N.	N.W	N.E.	E.	S.E.	S.	S.W.	W.		Fair.	Clou.	Rain.	Snow.	
	VII. A. M	II. P. M.	IX. P. M						days	days	days	days	days	days	days	days		days.	days.	days.	days.	
January,	25.44	33.28	28 87	29.19	79°	Fernandina,	–30 St. Peters,	109°	4.60	7.00	4.06	1.94	2 20	2 66	2 93	3 80	N. W.	16.20	7.80	1 86	4 06	Fair
February,	37 93	46.38	42.43	42.24	79	Fort Johnson, N. C.	–17 Plattsburg,	96	2 37	5.50	1 87	2.25	5.06	4.46	3 25	4.18	N.W. & S.E	18.16	6,50	3.12	1.87	Fair
March,	40.75	48 64	44.34	44 57	78	Belle Fontaine,	–10 St. Peters,	88	3 37	6.31	3.62	2.31	3 93	3.31	3.50	3 87	N. W.	17 93	7.06	4.25	1.81	Fair
April,	56 22	66.08	59.58	60.62	94	Council Bluffs,	10 St. Peters,	84	1 37	5.25	3 50	2.12	6.06	4 93	4.31	2 25	S. E.	18,52	7.05	3.94	.47	Fair
May,	61.13	71.38	64 80	65.77	90	Montpelier,	22 Sackett's Harbour,	68	1 35	4.35	3.52	2.11	6 35	2 94	5.76	3.41	S. E.	16.72	7.00	6.94	.11	Fair
June,	69.66	84.10	74.42	76.06	99	Prairie du Chien,	50 Sackett's Harbour,	49	2.35	3 11	2 41	2.11	6 05	4.47	6 05	3 29	S.E.&S.W.	17.44	6.16	6.83		Fair
July,	73.93	82.01	75.36	77.10	98	Fort Mifflin,	54 St. Peters,	44	1.61	2.57	2 34	2 15	5.53	5.61	7 80	3.00	S. W.	17 85	4.77	8 37		Fair
August,	72 58	80.85	74.61	76.01	105	Council Bluffs,	53 Boston,	52	1.65	3.57	2.61	1.88	4 23	4 08	9.15	3.84	S. W.	18.74	5.11	7.48		Fair
September,	66.67	76.09	70 03	70 93	99	Council Bluffs,	30 St. Peters,	69	2.23	4.44	4.69	2 19	2.53	3 61	7.40	2 50	S. W.	19 96	5.14	4.88		Fair
October,	51.96	60.27	55 55	55.92	88	Baton Rouge,	20 Prairie du Chien,	68	3 38	6.38	5.00	1.61	3.73	3.50	4.00	3.08	N. W.	18.62	6.65	5.14	.48	Fair
November,	42.08	50.40	45.67	46.05	84	Baton Rouge and Camp Ripley,	–7 St. Peters,	91	2.82	6.82	4.39	1.10	3 00	3.39	5.10	3.82	N. W.	16.89	8.17	3.37	1.48	Fair
December,	33.98	40 79	36.98	37.25	84	Fort Scott,	–20 St. Peters,	104	3.29	7.95	4.48	1 77	3 22	2.74	3.77	3.74	N. W.	15.25	8 10	4 25	3 39	Fair
For 1820.	51.86	61.69	56.05	56.53	*105	Council Bluffs,	†–30 St. Peters,	135	2.53	5.27	3 54	1.96	4 32	3 80	5.24	3 39	N.W.&S.W	17.69	6.62	5.04	1.14	Fair

* Sunday 13th of August. † Sunday 30th of January.



CORNUS CIRCINATA